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# Consumption



JOHN B. HAWES, 2D, M. D.

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## PREFACE

I fully realize that there are already many books, large and small, that are intended to give the general public some definite knowledge on the subject of tuberculosis. My only criticism of many of these books is that they are either so short that certain important practical details are omitted and thus present only a summary of the subject, or else they are so long and so replete with historical information and scientific discussion, that they defeat their own purpose. I have tried to make the present volume a mean between these two extremes.

This book is in no way intended to take the place of a physician, but to be of service to him, to the patient, and the patient's family. The busy practitioner cannot be expected to have more than a general idea as to the cost of living at Saranac Lake, for instance, and how to get there. Such information and other of like nature I have included in this book. My hope is that it will prove of value.

JOHN B. HAWES, 2ND.

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## CONSUMPTION





# CONSUMPTION

## CHAPTER I

### WHAT CONSUMPTION IS AND WHAT IT DOES

Tuberculosis is a disease caused by a germ or tiny plant called the tubercle bacillus. This germ enters the body usually by way of the mouth and goes to the lungs, or elsewhere and then grows and causes the disease tuberculosis. When the disease is in the lungs it is known as pulmonary tuberculosis, consumption, or phthisis. The germ may go to any part of the body and there cause disease. Pott's Disease or tuberculosis of the spine or hump-back; hip disease, white swelling of the knee or ankle; lupus, tuberculosis of the skin, scrofula, tuberculosis of glands, and tuberculosis of the special organs, such as the eye, ear, nose, throat, kidneys, etc., are all manifestations of this disease. No matter where located, tuberculosis is always the same and due to the same cause.

The disease is a very ancient one. Traces of it have been found in Egyptian mummies; it was well known to Greek, Arabian and Roman doctors, philosophers and historians. Up to comparatively recent times, it was considered an absolutely incurable disease, and not until the early part of the

## CHAPTER II

### HOW GERMS OF TUBERCULOSIS GET INTO THE BODY

Tuberculosis, or consumption, is primarily a home or house disease. This means that it is transmitted from one person to another in the early years of life in the intimate contact of the home. In the majority of instances, when a person gets consumption, it means that some one has been either ignorant or careless, or both. The disease is spread by means of the sputum. As the process develops in the lungs, the germs grow and multiply, and the lung tissue is destroyed. This broken down lung substance, often containing millions of tubercle bacilli, is raised by coughing and discharged as spit or sputum. Thus the great majority of cases of consumption comes from other cases. The sputum which the careless consumptive spits out on the floor, sidewalk, or elsewhere, dries, is ground up into dust and may be breathed in by some young child who thus becomes infected with the disease. Infection may take place by direct inhalation, in which case the germs are breathed directly into the lungs, or the germs may lodge in the mouth or throat and thence be carried by food or saliva into the stomach and from there into the lungs or, finally, the germs

may be taken up by the lymph vessels and by this means carried eventually to the lungs. The exact path of infection is not so important to bear in mind as the fact that the germs almost always get into the body through the mouth.

Tuberculous infection is the rule rather than the exception, but there is a vast difference between tuberculous infection and tuberculous disease. Tuberculous infection means that somewhere in one's body, usually in the lymph glands, there are some germs of tuberculosis which, however, may do no harm in any way. It has been proved beyond doubt that almost every adult has germs of tuberculosis somewhere in his body, and that by the time nearly every child reaches his fifteenth year, he has been infected with this organism. The fact that most of us are well and strong and that we are quite unaware of the presence of this most unwelcome visitor is the best evidence we have of the curability of this disease.

Tuberculous disease is of course quite a different thing. This means that in some way or other, because of inherited weakness, bad habits, bad living conditions, etc., the system has been weakened and the powers of resistance lessened so that the germs of tuberculosis grow and multiply and produce symptoms. When this happens it is an indication that the tuberculous infection, usually already present, has changed into tuberculous disease.

Whether or not active tuberculosis or consumption develops in the body depends, therefore, on va-

rious factors. It is, for instance, comparatively rare in persons over sixty years and under fourteen or fifteen years. Thus the age is important. The disease usually develops between the ages of 15 and 35 years. Again, much depends on the physical condition. A constitution weakened either from inherited tendencies or from overwork or disease falls an easy prey to tuberculosis. The length and intimacy of exposure is a third most important factor in tuberculous infection. We are most of us able to cope with a small number of such germs even for a long time, or a fairly large number at once, but even the strongest and healthiest of us cannot withstand the continued invasion of our bodies by large numbers of germs. Thus, whether or not tuberculous infection becomes tuberculous disease depends in large measure on the length and intimacy of exposure to the outside source of contagion.

It is important to remember, therefore, first, that it is practically impossible to escape entirely these omnipresent germs of tuberculosis, but that, if we keep our bodies strong and well, we need not worry about contracting this disease, and, second, that anything which tends to lower our vital forces and bodily resistance, such as alcohol, overwork, neglected coughs and colds, and other diseases such as syphilis will greatly increase the chances that the disease may gain a foothold and cause consumption to develop.



Christmas Morning.—Westfield State Sanatorium, Massachusetts



This is a good way to arrange a netting as a protection from insects. Notice the barrel-hoops tied to the bedstead. Loaned by the  
Journal of the Outdoor Life

## CHAPTER III

### BOVINE TUBERCULOSIS

There are various forms and varieties of tubercle bacilli. The two great groups into which they are divided are the human and the bovine types. It has been found that the germ which causes tuberculosis in cattle varies in many ways from the germ causing human tuberculosis. It is likewise true, however, that the bovine type of organism may and often does cause tuberculosis in human beings. The great source of such infection, naturally enough, is the milk of cows having tuberculosis. It is possible that a large percentage of cases of what is called "surgical" or non-pulmonary tuberculosis, such as bone, joint or glandular disease, comes from this source. Butter and cheese, both milk products, and beef are likewise possible sources of infection.

For these reasons a clean milk supply is essential. There are many who think that there is much exaggeration and needless alarm in the modern campaign for clean dairies and healthy cows free from tuberculosis and other diseases. This, however, is the only way in which we can eliminate the danger of infection from this source. Prevention is far better than



cure and costs less. Pasteurizing all milk whenever there is any reason for doubt is a simple procedure and a sure way to remove all its dangers. The milk to be pasteurized is simply heated to 165° F., kept at this temperature for twenty minutes, and is then allowed to cool on ice. The nourishing qualities and digestibility of the milk are in no way impaired by this process.

Under ideal conditions it ought not to be necessary to pasteurize milk. Milk from a tuberculin-tested herd is perfectly safe. Such herds are at present hard to find, however, and it will be many years before the public realizes the necessity of demanding that this be done to all herds.

In the meantime, if in any doubt, *pasteurize your milk.*

## CHAPTER IV,

### EARLY AND IMPORTANT SYMPTOMS OF PULMONARY TUBERCULOSIS

Consumption is a local disease with both local and general manifestations. In other words, although the tuberculous process is localized in the lungs, its symptoms may refer not only to the lungs but to every part and organ of the body. Hence the terms "local" and "constitutional" symptoms. Failure to recognize this fact on the part of physicians has led to many errors in diagnosis.

#### LOCAL SYMPTOMS

*Cough* is an early and constant symptom; with the cough there may or may not be sputum. There is no cough characteristic of consumption. The so-called "hacking" cough is no more characteristic of consumption than any other kind of cough. *Any cough which lasts over three or four weeks* regardless of anything else should be carefully investigated.

*Blood spitting* is a most important sign. It is far safer to take it for granted that the raising of blood, blood spitting, either clear or mixed with sputum, in large or small amounts, with or without

cough or other symptoms, means tuberculosis of the lungs until the contrary is definitely proved. Failure to do this has resulted in countless tragedies. If your physician says that the blood comes from the nose, teeth, gums, tonsils, throat or stomach, go to another doctor and get this statement confirmed. It is possible for blood to come from any of these sources, but very improbable.

*Pleurisy* causing pain in the chest is usually a form of tuberculosis. If the pleurisy is a "wet" one, i.e., accompanied by water inside the chest, it is practically always due to tuberculosis and should be treated as such.

*Hoarseness* lasting over a few weeks is an important symptom, requiring rigid investigation. It may be an early sign but is usually a late manifestation of the disease.

#### CONSTITUTIONAL SYMPTOMS

These symptoms about to be described are of the utmost importance; likewise they are most frequently disregarded.

*Fever*, unless the real cause is clear and definite, should be looked upon as very suggestive of tuberculosis. When a person becomes hot and flushed in the late afternoon, and on taking the temperature is found to have some fever, even though slight, look out for tuberculosis. Call the doctor and have him investigate it. The normal temperature is anywhere from 97° to 98.9° Fahrenheit. A temperature of 99° or over requires investigation.

*Loss of weight.* The average person either gains weight or holds his own weight with slight variations, depending on the season and other self-evident causes. Any loss of weight, sudden or gradual, which *cannot be explained* is a serious condition. If this loss of weight is accompanied by a loss of strength and energy, the condition is a doubly serious one. Constant fatigue, "that tired feeling," especially in the morning, listlessness, ease of tire, should have some adequate explanation. If none can be found tuberculosis must be at least considered as a possible cause. Night sweats, chills, flushes, pallor, loss of appetite, all sorts of dyspepsias and irritability are minor symptoms to which the physician's attention should be called. "Influenza," "malaria," "low fever," "walking typhoid," are frequent diagnoses given to explain symptoms really caused by tuberculosis.

The important signs and symptoms of early tuberculosis, or consumption, therefore, with which the layman should be familiar are as follows:

1. A cough with or without sputum lasting over four weeks.
  2. Blood spitting.
  3. Unexplained fever, especially if associated with a rapid pulse.
  4. Unexplained loss of weight and strength.
- These may not mean tuberculosis, but in the great majority of instances they do, and therefore require thorough investigation. Do not neglect them, but go to a doctor and tell him about them.

## CHAPTER V

### WHAT TO DO IF YOU THINK YOU MAY HAVE CONSUMPTION

In the last chapter the important signs and symptoms of early consumption were discussed. If you have any of these symptoms, or if for any reason you think you may have the disease, *do not delay*, but go to your doctor at once and tell him about it. Remember that this may be the most important step in your life; that tuberculosis is easy to cure if taken in hand early enough, but that in the later stages it is most difficult and often impossible to cure. Therefore, if you have a cough with or without sputum, especially if it is associated with loss of weight, strength, etc., or if you feel tired and listless *without good reason*, and always if you have ever spat up any blood, go to the best doctor you can find and tell him frankly all about it. If the doctor says you are simply run down, or have a mild bronchitis, or that the blood came from your nose or throat, remember that all doctors are liable to make mistakes, and that you may possibly have tuberculosis after all. If, after faithfully following out the treatment he has outlined, you still feel just as badly as before, go to another doctor, or a tuberculosis dis-

dispensary or to a specialist on the subject. Remember that it is your life and your health which is at stake and that you have a right to secure as many opinions as you please.

If you live in a large city or town, there is almost sure to be an anti-tuberculosis association which maintains or can refer you to a good dispensary where specially trained men can examine you. If there is no such organization, write for advice as to where to go and what to do to your State Board of Health, or your State tuberculosis association. In Massachusetts, for instance, a letter addressed to the State Board of Health, the Massachusetts Tuberculosis Commission, or the Massachusetts Anti-Tuberculosis League, Boston, or a letter to the National Tuberculosis Association, New York City, will reach the proper designation and will bring a prompt and reliable answer to all your questions.

Remember that your health is your stock in trade and your bank account. No sacrifice is too great to guard it. Even if it costs a great deal in time, trouble and money, it is all well spent and invested at high interest if you find out the exact condition of your health, and whether or not you have consumption. You are like one fighting in the dark until you know the exact state of affairs. Knowledge is power and will enable you to act intelligently and to keep your health, ward off disease, or to cure it.

## CHAPTER VI

### WHAT TO DO IF YOU ARE TOLD AND KNOW THAT YOU HAVE CONSUMPTION

Let us now take up the case of a man or woman who has had some of the symptoms above described, who has been to a good doctor or dispensary, and has been told that he or she has consumption in its early stages. What are you going to do about it? What is the next step? These are constantly recurring questions, and on the correct answers to them hang life and happiness.

In the first place, *do not give up*. Make up your mind to *fight*. Remember that countless thousands have had the same problem to meet that you now have, and have faced it bravely and have won out. What they have done, you can do. Remember, also, that you are dealing with a chronic, one of the most chronic, diseases. It has taken many months or even years for the disease to develop in your body, and it will take as long a time to conquer it. Prepare to spend at least the *next year* of your life in getting well. Do not think you can carry on any other occupation or business at the same time. "The best occupation for a consumptive is that of

getting well." This wise motto stands over the entrance to one of the oldest and most famous sanatoria in the world.

Do not look too far ahead or attempt to do everything at once. The patient often undergoes a sort of panic or mental collapse after he is told by the doctor, no matter how kindly, that he has consumption. This may occur in your case. It will soon pass off and you will find yourself able to face bravely and even cheerfully the problems of the present and the future. If your doctor gives you no clear or definite instruction, but merely deals in vague generalities, such as to "live outdoors," or to "go out West," go to another doctor who *can* and *will outline* for you a *practical* and *clear plan* of *campaign*. This is of vital importance.

Make up your mind to do *something*, and to *do it at once*. Put away all pride unless your finances are such that you can afford this luxury. Few of us are able to do so. It takes a long time, and costs money, to cure consumption, and your plans must include not only the present but the future. Do not worry any more than you can help. This never did any good. If you are "up against it" financially, there are many state, county or municipal sanatoria where the cost is little or nothing. *Be an optimist.*

As a general thing, there are three courses open to you, which will be considered in detail in subsequent chapters.



1. Home treatment.
2. Treatment in a local or not far distant sanatorium.
3. Treatment at a distance and in another climate, such as Colorado and the West or South.

## CHAPTER VII

### HOME TREATMENT

What the home treatment of consumption should be and what it usually is are unfortunately two very different things. Of late years we have made tremendous advances in this method. Ten years ago, home treatment merely meant that the patient lived at home; he rarely slept outdoors; he followed no definite rules or regulations as to exercise, rest, etc., and was under no close or adequate supervision. To-day, thanks to the work of Dr. Charles L. Minor of Asheville, North Carolina, and of Dr. Joseph H. Pratt of Boston, the "home sanatorium treatment," as it is called, may be one of the most effective means that we have at our disposal of treating consumption.

The difficulties of home treatment increase as the finances decrease. Remember that it is not so inexpensive as it seems; although you are not paying out a certain definite sum each week for board, *some one* is paying the bills just the same. The advantages of home treatment are as follows:—

1. There is no need of breaking up home and family.
2. The patient may be happier and more contented.

3. If he gets well, he does so in his own and not a different climate. His chances therefore of keeping well in this climate are better.

4. There is no radical and dangerous sudden change which the sanatorium patient undergoes on leaving the institution to return home.

The disadvantages of home treatment may be summed up as follows:—

1. There are no strict rules and regulations. There is a constant temptation to do too much and to do the wrong things.

2. There is not the strict and constant medical supervision which exists in the well-run sanatorium.

3. The great help provided by the example of what others are doing who have the same disease and who are getting well, is lacking.

4. The climate, air and surroundings are rarely so good as at a sanatorium or health resort.

5. It is often more difficult to sleep outdoors and to lead the strict sanatorium existence at home, especially in a large city, on account of publicity, etc.

This, in my opinion, is a fair statement of the relative advantages and disadvantages of home treatment. Home treatment as carried on by the men to whom I referred above, Dr. Minor and Dr. Pratt, has many of the advantages and few of the disadvantages. Such men, however, are rare. Home treatment as it is usually carried on by busy general practitioners falls very far short of this. The patient with ample means, who can afford a

good sleeping porch, nurses, and constant high-class medical attendance may do very well at home. In most instances, I think it dangerous for those in poor or even moderate circumstances to attempt it.

The essentials of home treatment are as follows:

1. Outdoor living and sleeping. This will be considered in detail in the next chapter.

2. Persistent, absolute and prolonged rest until all symptoms, fever, high pulse, cough, sputum, loss of appetite, etc., subside and then graduated exercise under strict medical supervision.

3. Diet up to the limit of digestion, according to no hard and fast rule, but to suit individual needs. Diet in consumption will be taken up in a later chapter.

4. Faithful and persistent attention to details.

5. A competent physician who is *willing to spend the time* to attend to every detail, and who *knows how* to do so.

It will be readily seen that it is not easy to meet all these qualifications of proper home treatment. In many instances, however, it seems the wise course to pursue. As a general rule, when home treatment is decided upon, a preliminary stay at a sanatorium or health resort if only for a short time will be of immense value in instructing the patient to carry on proper treatment at home.

## CHAPTER VIII

### HOW TO LIVE AND SLEEP IN THE OPEN AIR

BY THOMAS SPEES CARRINGTON, M.D.

*Published with the permission of The National Association for the Study and Prevention of Tuberculosis.*

#### INTRODUCTION

Consumption, or tuberculosis, is a disease of the lungs which is taken from others and is not simply due to catching cold. It is generally caused by germs, known as tubercle bacilli, which enter the body with the air breathed. The matter which consumptives cough or spit up usually contains these germs in great numbers, and if those who have the disease spit upon the floor, walls or elsewhere, the matter will dry, become powdered, and any draught or wind will distribute the germs in it with the dust in the air. Any person may catch the disease by taking in with the air he breathes the germs spread about in this manner. He may also contract the disease by taking into his system the germs contained in the small drops of saliva expelled by a consumptive when coughing or sneezing. It should



A good method of building a porch on the back of a cottage for country use.  
Loaned by the Journal of the Outdoor Life



A good method of supporting a tent by a frame, showing the well-built floor and ventilator in the peak. Used at the Otisville Sanatorium, N. Y.

be known that it is not dangerous to live with a consumptive if the matter coughed up by him is properly disposed of.

Consumption may be cured at home in many instances if it is recognized early and proper means are taken for its treatment. When a member of a family is found to have consumption and cannot be sent to a sanatorium, arrangements for taking the cure at home should be made as soon as the disease is discovered.

The following directions are published to help persons to carry out the open-air treatment in their own homes. Many families are unable to make any great change in their mode of living and cannot afford to fit up porches and buy extra bedding or warmer clothing. A number of the suggestions given here are very simple and inexpensive, and will help those who would like to use what they have at hand in making an outfit for outdoor life.

*It is important, in the treatment of tuberculosis, to breathe air that is fresh and pure, to eat an abundance of good food, to stop heavy work and worry, and to take a bodily and mental rest by lying down before and after the noon and evening meals.* To obtain the first, the patient must live out of doors. This means that as many hours of the day and night as possible should be spent in the open air, and in order to carry out this treatment some place must be provided which is not only protected from wind, but also from rain and snow, as nothing except the most severe cold weather should prevent



the patient from living and sleeping there. The outdoor shelter should be large enough for a bed, a reclining-chair and a table. It should overlook pleasant and sanitary surroundings if possible, as it is to be the home of the patient for months, and will give better results if comfortable and attractive.

#### HOW TO TAKE THE OPEN-AIR TREATMENT IN A TENEMENT HOUSE

Tenement house dwellers and persons living in apartment houses in large cities should make every effort possible to give the open-air treatment to a member of the family who contracts tuberculosis. First, consider the possibility of moving into the suburbs or nearby small towns. If this cannot be done, try to obtain from the landlord the use of the roof, and build a small shack there as described later on in this chapter. If this is beyond the means of the family, use one room with a window opening on a street or large court for the patient, and then place the head of the bed beside the window and cover it with a window tent. The cost of a window tent is about \$10.00, and if it cannot be obtained, take two large, heavy cotton sheets, sew them together along the edge, tack one end of the double sheet to the top of the window casing and drop the lower end over the outer side of the bed, fastening the bottom of the sheet to the bedrail with tape. There will be enough cloth hanging on each side of the window to form the sides of the tent, and these should be fastened to the window casings.



Tent shelter on a tenement house roof, partially protected from the wind by the stairway cover and nearby buildings. Work of the Bellevue Hospital Tuberculosis Clinic



A bed on the roof of a tenement house, protected on the sides from the wind by the walls of upper stories. Work of the New York Association for Improving the Condition of the Poor

A window tent can be made at home for about \$3.00 by using 12 or 15 yards of heavy denim or light canvas. One straight piece of denim should be hung from the top of the window casing to the outer side of the bed, and the openings between this and the side window casings filled in with sides cut and fitted from the balance of the cloth. By these methods the patient gets fresh air from the window and the room is kept warm in cold weather as a place for dressing and toilet purposes. During mild and warm weather, the tent can be removed and the window kept open both at top and bottom.

The flat roofs of tenement and apartment houses in large cities should, if possible, be used as a breathing place by the tenants. Shacks or cabins can be built upon them at small cost and make an economical and easily provided shelter.

#### HOW TO BUILD A SMALL SHACK OR CABIN ON A FLAT ROOF IN THE CITY

Two by four timbers should be used for the frame and siding boards for the back and sides. The front of the shack should face slightly to the east of south and be left open, but arranged with a canvas curtain, tacked on a roller so that it can be closed in stormy weather. The shack can be built cheaply with rough boards and the roof covered with tar paper or other roofing. As the vast extent of flat roof space in all cities and in many towns should be used for outdoor living and sleeping, detailed plans for building a shelter on them

and a list of material, together with the approximate cost, are given. The list will be understood by any carpenter, and when the shelter must be built economically it is advisable to confer with the neighborhood carpenter, rather than place the construction in the hands of a contractor or builder.

LIST OF MATERIAL AND ESTIMATE OF COST FOR CONSTRUCTING A SMALL OPEN-AIR SLEEPING SHACK ON A CITY ROOF OR IN A COUNTRY YARD

328 feet of rough lumber as follows, at \$30.00 per M, \$9.84.

4 pieces, 2 inches by 4 inches by 12 feet, sills.

5 pieces, 2 inches by 4 inches by 12 feet, floor joists.

14 pieces, 2 inches by 3 inches by 14 feet, studs.

5 pieces, 2 inches by 3 inches by 12 feet, plate.

1 piece, 2 inches by 6 inches by 12 feet, plate (front).

1 piece, 2 inches by 8 inches by 12 feet, rail for sliding sash.

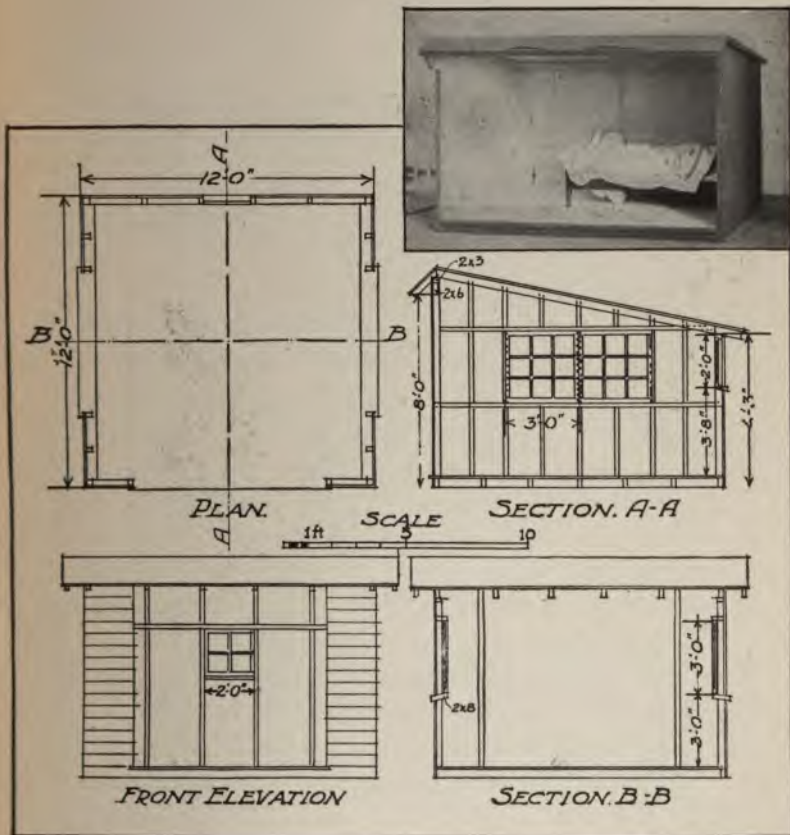
9 pieces, 2 inches by 4 inches by 14 feet, rafters and rafter tails for front eaves.

300 feet of novelty siding for walls at \$30.00 per M.....\$ 9.00

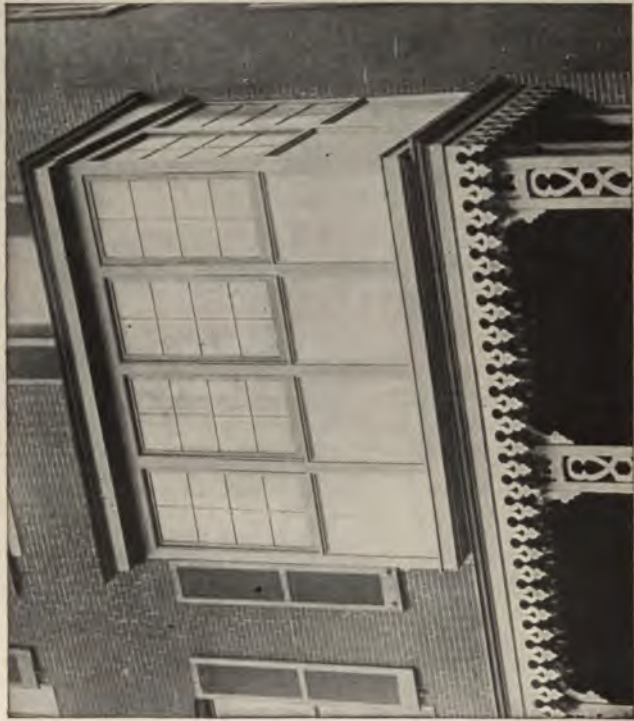
250 feet of shiplap roof boards at \$26.00 per M ..... 6.50

200 feet of 7-8 inch common flooring at \$32.00 per M ..... 6.40

One-half roll Neponset Red Rope Roofing at \$5.00 per roll ..... 2.50



Front view, Floor plan and Elevations of a shack for flat roofs, to go with list of lumber opposite. Loaned by Mr. W. H. Scopes



A temporary porch with glass and sash protection, built on the rear wall of a tenement house. Loaned by the Journal of the Outdoor Life

10 pieces of 1-inch half round for roofing at 1 cent per foot.....	1.40
1 canvas curtain on roll .....	5.00
4 sliding sash, 3 feet by 3 feet, at \$2.00....	8.00
1 casement sash and frame, 2 feet by 2 feet, at \$2.00 .....	2.00
Hardware .....	1.00
Strips for sliding sash.....	1.00
Paint .....	5.00
	<hr/>
	\$61.64
Labor .....	25.00
	<hr/>
	\$86.64

NOTE.—Canvas can be bought by the yard and a curtain made at home.

HOW TO ARRANGE A PORCH ON A HOUSE IN  
THE COUNTRY

If the family lives in a small town or in the country, it will usually be found that a porch is the most convenient way of providing open-air quarters. In selecting a site for the porch, it is well to remember that the patient should be placed out of doors in such a way that the cure can be taken with comfort at all seasons of the year. For the winter months the best place is on the south side of the house, as there will be found the greatest amount of sunshine. If this cannot be done, choose first the east, or second the west side, but not the north side except as a last resort, for it is a windy and cold position in



winter. The back of the house is usually better than the front as the porch cannot be seen from the street, but what is of the most importance is to *find a sheltered spot protected from the wind, for the wind is much harder to bear than even intense cold.* When a house has permanent verandas and the family cannot afford the expense of providing a special porch for the patient, the permanent veranda on any floor may be used and privacy and protection obtained by putting up canvas curtains or bamboo screens.

If a special porch for winter use is to be built, place it on the south side of the second story of the house, with an entrance into a room which can be used by the patient. For a passageway to the porch cut one of the windows down to the floor and put in a door 3 feet 8 inches wide, so that the bed can be rolled from the room to the porch without difficulty. If the room is not heated by some other means, a stove should be used and the air kept warm, so that the patient may have a comfortable place for dressing, eating, and to enter when chilled. Build the porch out from the door 10 feet wide by 10 feet long and 7 feet or more in height from floor to ceiling. Place glass and sash on the side of the porch most exposed to the weather, and hang canvas curtains on rollers to enclose the open sides in stormy weather. Lay the floor with narrow spruce boards, using white lead and oil to fill in the cracks, at a grade of 1 inch to 5 feet, so that water will not stand during stormy weather. A porch of

this kind can be built in small towns and in the country for from \$50.00 to \$100.00, the cost depending upon the class of material used and the way the porch is finished.

#### HOW TO BUILD A CHEAP PORCH

A useful porch can be built for \$12.00 or \$15.00 with cheap or second-hand lumber, and if only large enough to receive the bed and a chair will still be effective for the outdoor treatment. The roof can be made with a canvas curtain or a few boards and some tar paper. The end most exposed to the wind and rain and the sides below the railing should be tightly boarded to prevent draughts. A window can be used for the approach, but it will be more convenient if it is cut down to the floor and a small Dutch door put in below the window-sash. Second- and third-story porches are supported from the ground by long 4 by 4 posts, or, when small, they can be held by braces set at an angle from the side of the house.

#### HOW TO PROVIDE A SHELTER FOR THE SUMMER AND FOR HOT COUNTRIES

Consumptives need a good shelter in tropical countries and protection during the summer months in northern climates. A porch should be placed on the side of the house where the direct rays of the sun will not strike it during the middle of the day, and tents or shacks placed under shade-trees or in the shadow of large buildings.

Awnings which jut out from the roof of a porch or shack are used for shade, and Japanese drop curtains made of long strips of bamboo for privacy, as they do not stop the current of air.

In places where the streets are not watered, a hose should be used to lay the dust in front of the house, and the floor of the porch or shack sprinkled once or twice each day to cool the surrounding air.

The open sides of the shelter must be screened from the floor to the roof with wire netting as a protection from flies and mosquitoes, and when this is impossible, a mosquito-bar made of cheese-cloth, netting or scrim should be hung from the roof or laid over barrel-hoops attached to the head and foot of the bedstead.

#### TENTS AND TENT HOUSES

Tents and tent houses can be used as a shelter in warm, dry climates and for the summer months in northern countries, but they are not very satisfactory for winter use in cold climates.

In order to make a tent comfortable for a sick person, it should have a large fly or double roof with an air space between, a wide awning in front where the patient can sit during the day, a board floor laid a few inches above the ground and the sides boarded up two or three feet from the floor.

#### THE BED AND BEDDING USED IN OUTDOOR SLEEPING

An ordinary iron bedstead with woven wire spring 3 feet 6 inches wide and a moderately thick



A method of screening beds in hot countries. Loaned by the Journal of the  
Outdoor Life



A knitted helmet for protecting the head, neck, and shoulders. Loaned by the  
Journal of the Outdoor Life

mattress are all that are necessary except for very cold weather. A bedstead which can be rolled about easily is a great convenience, and should therefore be fitted with small rubber-tired wheels or casters. A good hair mattress is most desirable, but when it cannot be obtained, a cotton-felt mattress can be bought for as low as \$4.00, or a wool mattress for about \$10.00. In northern climates, where cold weather must be expected, two mattresses with several layers of newspaper between them are often used. Over the mattress place an old blanket or a cotton bed-pad, the same width as the mattress, and on this the ordinary bed-sheets or blanket-sheets.

#### BED COVERS USED IN OUTDOOR SLEEPING

Persons who like heavy bed covering may use blankets, placing as many layers over the bed as desired for warmth. Those who cannot stand heavy covering can use down comforts, as they are very warm but light. If these are too expensive, lamb's-wool or cotton-filled comforts can be bought, or the material for wool or cotton quilts can be obtained for about \$2.00 and warm, satisfactory covering made in the home. Very cheap, light, but warm covering can be made by using paper blankets placed between two thicknesses of outing flannel or bed covers. These paper blankets are sold for 50 cents each and wear for about six months. A woolen horse blanket with an outside of canvas can be used as a covering to protect the bedding in wet and stormy weather.

## SLEEPING-BAGS

In very severe weather a sleeping-bag may be used for patients who are very susceptible to the cold. These bags can be bought at department stores for \$15.00 upward, or can be made at home by sewing blankets together around the edges, leaving the top open. In making a bag, use as many layers as may be desired, but place the same number of thicknesses on both sides of the bag. The blankets should be 7 feet long by 4 feet wide.

ARRANGEMENT OF PILLOWS IN OUTDOOR  
SLEEPING

Two pillows should be used in preparing the bed before retiring. Place them in the form of an inverted V, with the apex at the top of the bed and the head at the point where the two pillows meet. This position allows the shoulders to nestle between the pillows and protects them from the cold wind which will otherwise find its way under the bed-clothes when the patient lies on his side or turns over.

## HOW TO PREPARE THE PATIENT FOR THE NIGHT

In cold weather the outdoor sleeper should get into the bed in a warm room and have someone roll him out of doors. When this cannot be done, use a warm dressing-gown in going back and forth from the dressing-room to the porch, and warm the bed by placing in it for a few minutes before retiring,

a hot-water bag, hot bricks, soap-stones or bottles filled with hot water. In some instances it is well to leave a hot stone or bottle wrapped in flannel at one corner of the bed, where it will throw off heat slowly during the night.

In tucking in the patient at night, all covers except the top blanket or comfort should be tucked in under the bed-pad which lies on the mattress. The topmost cover is then tucked under the mattress to keep the under covers from sliding off when the sleeper is restless. This method of tucking-in forms a sort of sleeping-bag with the bed-clothes, known as the Klondyke bed, and prevents the cold air from reaching the body.

#### CLOTHING WORN AT NIGHT

The night clothes worn by the outdoor sleeper during the winter depend largely upon the strength of the patient. Some persons need much more than others, but even the weakest can usually keep warm if they have blanket-sheets and hot bottles. A woolen undershirt, a sweater, and a long outing flannel nightgown or bathrobe are usually worn, but in very cold weather some patients wear a pair of drawers made of flannel, a pair of bed-socks or knitted slippers and a woolen abdominal bandage.

#### HOW TO PROTECT THE HEAD FROM DRAUGHTS

The head of the bed should be shielded from the wind or a strong draught by placing it close to the protected end of the porch, or by covering it with a



canvas hood supported on a barrel-hoop attached to the bedstead or hung by a rope from the ceiling. The patient can wear a knitted skull-cap long enough to be pulled down to the end of the nose and over the ears, or a knitted helmet which covers the whole of the head, face, and neck, with the exception of a small opening for the nose and mouth. A hood shaped like an old-fashioned sunbonnet is very comfortable, and can be made at home from eiderdown or outing flannel by using as many thicknesses as may be needed. *Never cover the head with the bed-clothes.* If the nose grows cold, use a small piece of flannel, held by elastic bands from the ears, to cover the top, or a piece of cotton held in place by a strip of adhesive plaster. Care should be taken not to interfere with the inhaling of fresh air or to allow the breath as it is expelled from the nose or mouth to come in contact with the cloth and form icicles. Chapping of the face during the night can be prevented by using cold cream or vaseline about the nose and lips.

#### CLOTHING FOR DAY USE

The clothing for use during the day when the patient is up or sitting in a reclining-chair should be of light weight but warm. Underclothes of half cotton and wool or linen mesh, and a sweater which buttons in front, with the ordinary outer clothes, are usually worn. The overcoat for men, women, and children should be of fur if possible, as even the cheapest of skins are warmer than any other kind



After the Shower.—Patients Taking Treatment at the Rutland State Sanatorium, Massachusetts



School.—Westfield State Sanatorium, Massachusetts

of garment. If a new coat cannot be bought, a heavy cloth overcoat will give good protection, and be much warmer if it has a high, soft collar. Leather leggins and woolen tights are used as extra garments, and are a great comfort when taking exercise on cold days.

#### HOW TO PROTECT THE HANDS

Patients who wish to use their hands while sitting out of doors in cold weather can wear thin, well-fitting cotton gloves. These are used by army men, and can be bought for thirty cents a pair. Over them should be drawn a knitted woolen glove with the ends of the fingers and thumb cut off and bound to prevent unraveling. For ordinary protection, when not at work, a heavy fur or woolen mitten should be worn with long, woolen wristlets. Never use tight gloves of any kind in cold weather, as they restrict the circulation of the blood and cause the hands to grow cold.

#### HOW TO PROTECT THE FEET

Use woolen stockings, and if they cause irritation, wear a cotton stocking next to the skin. Sometimes two or more pairs of woolen stockings are necessary in very cold weather, but they must always be large enough to fit loosely. Felt shoes are warm and light, and are much used. Soft leather shoes covered by large fur-lined leather shoes are very warm and comfortable, but are expensive, as they must be made in a set, to order. Foot-muffs should be

used in sitting out during a cold day. They are made of fur or of cotton quilts sewed up like a bag, into which the feet can be placed. On very cold days the muff can be placed in a wooden soap-box with hot bricks beside it, and newspapers wrapped about the muff to fill in the empty space.

#### CHAIRS FOR DAY USE

An easy-chair is a great comfort to the patient during the day. A steamer chair is easily obtained and gives good service, and the canvas chair with a wooden frame can be bought for \$1.00, or the cane-seat extension-chair for \$2.50 up. A more durable chair is made for this purpose with an iron frame, costing about \$25.00, which can be transported and used in a rough manner without danger of breakage. To prevent the cold currents of air reaching the patient from below, the chair must be covered with some thick, closely woven, warm material. A fur rug is the best for this purpose, but several layers of blankets and newspaper will answer and are more economical.

#### TABLE FOR WORK AND AMUSEMENT PURPOSES

The patient should have a table handy on which to keep books and other things used for amusement or work. An adjustable table, the top of which the patient can swing before him or away, is a great convenience, and can be used as a book-rest when the hands are under cover.

GENERAL DIRECTIONS FOR THE CARE OF THE  
PATIENT

The directions for the care of the patient are not intended in any way to take the place of a physician's orders. Every consumptive should consult a doctor, and these suggestions are given to help the patient carry out his directions. Rest is a most important part of the open-air treatment, and exercise must be regulated by the doctor. Always have at hand an extra wrap, and never remain out if chilled. Cold weather should have a bracing effect, and when it does not, go into a warm room and get a hot drink, preferably milk, remaining indoors until comfortably warm. When going out again use more wraps, and keep behind a shield or screen that breaks the force of the wind. Always be cheerful and hopeful; never waste your strength in anger or by being cross. Lead a temperate life, go to bed early and get up late; do not use alcohol in any form except when prescribed by your doctor. Do away with tobacco if possible, and use only weak tea and coffee in small quantities. Never swallow the matter coughed up, but always destroy every particle by spitting in a paper or cloth which can be burned. Never allow the hands, face or clothing to be soiled by sputum, and if this happens by accident, wash the place soiled with soap and hot water. Men who have consumption should not wear a moustache or beard unless it is trimmed close. Particular care must be taken, when sneezing and coughing, to hold

in the hands before the face a cloth which can be burned. Soiled bed-clothes, nightdresses, other washable garments, and personal linen should be handled as little as possible until they are boiled prior to their being washed. The dishes used by the patient must be boiled after each meal.

All the above means care and work, but must be done both as a protection to the household and in order to bring about a speedy cure for the patient.

## CHAPTER IX

### TREATMENT IN A LOCAL OR NOT FAR DISTANT SANATORIUM. HOW TO GET THERE AND WHAT IT COSTS

As previously stated above, I believe that a stay at a well-run sanatorium or its equivalent, even though very short, merely a month or two, is a most valuable help in carrying out subsequent treatment at home or elsewhere. There are four reasons why people go to sanatoria:

1. To learn how to live so as to be able to carry on treatment faithfully and intelligently at home.
2. To get cured of their disease, if possible.
3. To stay cured, which is a very different proposition from merely reaching the stage when the process is called "arrested."
4. To learn how to help others and to keep them from getting sick.

There are sanatoria, public or private, in every State in the country. The cost of board varies from fifty to one hundred dollars a week down to nothing. For the vast majority of patients, only those institutions where the cost of board is very moderate or low are at all available. In some states there are no state or local low-priced sanatoria, and the pa-



tient, if in moderate or poor circumstances must make other arrangements. The difficulty usually consists in the fact that the average busy general practitioner has only the vaguest ideas on the subject, and can give no very definite instructions to his patient as to what to do or how to do it. At some state sanatoria only incipient cases and at others only those in the advanced stages are admitted, while a few take patients in all stages. Some demand payment of board from every patient, there being no provision for free treatment; at others the cost is four or five dollars only if the patient is able to pay it, while at still others, treatment is free for all. To some state institutions patients are admitted after making application on a blank, which any physician may fill out; others have special examining physicians who must see the applicant and decide as to his or her fitness to enter. Some sanatoria are at considerable altitude, others at nearly sea level. The cost of fares and the distance from home should be definitely known. All these points are important ones and of great practical value to the patient and his family and friends. The problem is how to find them out.

This is not difficult if the way is known. Those who care to consult a specialist and get definite information, and can afford to do so, should not hesitate to ask their family physicians to be referred to such a person. The very poor have this advantage, in that they can at any time go to a tuberculosis dispensary or clinic (the name and location of such

dispensary being found on inquiry from the State Board of Health or Anti-tuberculosis Association, as mentioned before) and there get the best of expert advice. Those who cannot do either of these things, however, should write to the National Tuberculosis Association, 105 East 22nd Street, New York City, for information or means of obtaining information on every phase of this subject; in addition to this a letter addressed to the *Journal of the Out Door Life*, at the same address as above, will be printed, with a full answer, in the next issue of this most admirable magazine. From the same sources information in detail as to private sanatoria and health resorts can be obtained.

Take, for example, the case of a patient, or friend or relative of a patient, who wished to find out about entering one of the state sanatoria in Massachusetts. He would first write to the State Department of Health at the State House in Boston. From there his letter would be referred to the Massachusetts Tuberculosis Commission, in the same building. The Secretary of this Board would at once write to the sender of the letter, answering the questions in detail, and enclosing suitable printed matter, circulars of information, etc. If necessary, a personal interview could later be arranged. From the same source application blanks and all details relating to the institutions under this Board could be obtained. Some such board or commission or source of information exists in every state, whose services are at the disposal of its citizens.

Private sanatoria cost more than state institutions and offer certain evident advantages. The price of board at the moderate priced ones ranges from \$12 to \$25 a week. There is, of course, more individual attention given to each patient, but, on the other hand, he has more freedom and is more likely to interfere with his progress by attempting too much. Whether at a large or a small institution, much depends on the mental attitude of the patient toward the disease, the doctors and the institution itself. At the Massachusetts sanatoria, patients are divided into two classes, the "Hospital" and "Sanatorium" classes. To the first belong those who look upon the sanatorium merely as a first-class boarding house, who will not co-operate with the doctors, who refuse to follow the details of treatment, and who break rules whenever they can do so without getting found out. These patients almost invariably do poorly. To the other class belongs the opposite type of patient who really wishes to get well and in so doing is willing to sacrifice some personal comfort and convenience in order to adhere rigidly to every slightest detail prescribed by the physicians. These patients do not always get well, but they do far better than the others. A card bearing the following suggestions is given to every patient before admission to a Massachusetts sanatorium. It would be well for everyone affected with this disease to study and digest the advice here given.

ADVICE TO PATIENTS ABOUT TO ENTER A  
SANATORIUM

You are about to enter a sanatorium in order to regain your health. Please read over the following suggestions carefully :

1. REMEMBER that your disease — tuberculosis — is a chronic one, and that it is cured only by patience, perseverance, and faithful attention to details over a long period of time.

2. REMEMBER that you are going to the sanatorium not only to cure your disease or to arrest its progress but also to LEARN HOW TO LIVE SO AS TO KEEP WELL AFTER YOU LEAVE THE SANATORIUM.

3. BEAR IN MIND ALWAYS that unless you do learn how to live while at the sanatorium and follow out these rules of living after you leave you will be very apt to have a relapse of your disease later on.

4. REMEMBER that while at the sanatorium you must obey certain rules and regulations. These are absolutely necessary. Nothing unreasonable will be asked of you. The more closely you adhere to these rules and do what the doctor says, the better are your chances of getting well.

## CHAPTER X

### SARANAC LAKE. WHERE IT IS, WHAT IT OFFERS TO THE CONSUMPTIVE, AND HOW TO GET THERE

I am taking Saranac Lake and the sanatorium there situated as the best example I know of a health resort where patients of moderate means as well as those who are better off can find high-class accommodations and receive the best of treatment. There are other places equally good, such as Liberty, New York, or Asheville, South Carolina. I shall describe in detail the village of Saranac Lake itself and what it offers to consumptives because I believe that in many ways it has more advantages and fewer disadvantages than any other place I know. I send my own patients there, and, when visiting Saranac Lake myself, I find a constant source of inspiration and renewed vigor in this little mountain village.

Over forty years ago, a New York physician, Dr. Edward L. Trudeau, was told by his medical advisers that he had consumption and must at once leave the city. This he did, giving up everything that meant to him success in his profession. He went to the village of Saranac Lake and there

spent the winter nearly alone, living an outdoor life. To the surprise of his friends he rapidly improved. He finally started a little sanatorium for a few patients, so that other sufferers might profit by the air and the climate and lead the life which had proved such a boon to him. This was the beginning of the Trudeau Sanatorium,—now a large, flourishing and famous institution. Despite his tremendous handicap, Dr. Trudeau has done a great work and has brought hope, health and happiness to countless victims of tuberculosis.

The village of Saranac Lake is in the Adirondack Mountains, north of Albany, an all night's ride from New York or Boston. The elevation of the town itself is about 1600 feet, but it is surrounded by some of the highest Adirondack peaks. There is a permanent population of over 6,000. The climate is a typical one of that region—cold and dry in winter and fairly warm, though rarely uncomfortably so, in summer. The winter, spring and fall are the popular months. March is apt to be wet and stormy. There is not as much sunshine as there is in the South or the West, but as much as or more than in New England and the Northeast. The air is dry and intensely stimulating. One can sit out of doors with the temperature far below zero without discomfort. In the summer, as in all such places, there are apt to be a few intensely hot days, but for the greater part of the time one can be perfectly comfortable.

The cost of board at the sanatorium itself is \$8

a week. Only early and favorable cases are taken at this institution, for whom there are special examiners in New York, Philadelphia, Boston and other large cities of the East. The names and addresses of these physicians can be obtained by writing to the sanatorium itself, or to any local anti-tuberculosis association. The great majority of patients are not in the sanatorium, but live outside, in or near the village, in private boarding houses, or keeping house for themselves. One cannot get good board at Saranac Lake for less than \$14 a week; the patient can pay as much more than this as he cares to spend. The cost of medical attendance is very low.

Saranac Lake, which is entirely distinct from the village of Saranac, can be reached from New York or Boston by a through night sleeper which leaves late in the afternoon and arrives at the village at about six the next morning. From Montreal and the North and from the West there are also through trains. No one should go to this place unless definite arrangements have been made beforehand. The patient's local physician should write to one of the Saranac Lake doctors and state in detail the medical side of the case; the patient himself or his family should also write, giving details as to finances, price to be paid for board (always remembering that this is a question of months and not merely a few weeks), the exact date of arrival, etc. Until all such arrangements are definite and clear, the patient should not start on his journey. On ar-

rival in the morning, he should take a carriage (the fares are very low) to a hotel, where he can get breakfast and rest for a while. Unless it has been arranged beforehand, he should then get in touch with the doctor who is to have charge of the case and plan to meet him or be directed to the boarding-house or home where he is to stay permanently. All questions concerning every detail of life at Saranac Lake will be promptly and accurately answered by writing to the Secretary of the Saranac Lake Society for the Control of Tuberculosis.

One is very likely to think of Saranac Lake as a place where wan-faced invalids abound. Nothing is further from the truth. It is true that many sick people go there, but on the whole, the atmosphere of the place is cheerful, bright and optimistic. I well remember a friend, himself a patient, who had been at Saranac for years, saying to me: "Doctor, we're all chipped and broken pottery here, but we rattle around and make a very cheerful noise after all!" Patients spend their daily stint of eight hours out of doors without complaining or grumbling. The first week or so may be hard, but after this the force of the example of what everyone else is doing is so strong, and the results are so good that one accepts the situation without a murmur. The honor system prevails. It is easy to break rules and regulations, and to disobey the doctor if you want to; but you don't want to. This is why so many people are cured up there who never would



have been cured at home, simply because they could never have stood the strain of carrying on by themselves the rigid sanatorium régime.

I do not wish to give the impression that Saranac Lake stands alone and that there are not many other places where as good results can be obtained. I take Saranac merely as an example. Liberty, New York, Ashville, North Carolina, Rutland, Massachusetts, are localities where the best of conditions climatic and otherwise may be obtained. I do feel, however, that Saranac Lake offers more for the money invested to those who can go there than any other place I know.

## CHAPTER XI

### COLORADO AND THE WEST

I have never sent a patient with active pulmonary tuberculosis West or Southwest unless the patient had enough money so that he did not have to worry about the expense. Even so, the patients whom I have told to go to Colorado or elsewhere in the West form a very small and limited class. My reasons for feeling this way are as follows:—

1. For the patient whose home is in the East, the great cost of transportation to the West and the comparatively small number of sanatoria where patients can get low priced board. Fifteen to twenty dollars a week is an average rate for private institutions accommodating non-residents.

2. The altitude is too high for patients with weak hearts, and dangerous for those with a tendency to hemorrhage.

3. The great distance from home and the impossibility of visits from relatives and friends leads to homesickness, loneliness, and mental discontent. These are great handicaps in fighting tuberculosis.

These are the chief objections to life in the far West for the average consumptive. There are, however, certain advantages which must be given due weight. The climate is remarkable in many

ways; there is sunshine and plenty of it winter and summer, all the year round, and air so dry that it is vastly easier to live an outdoor life with comfort in the winter than it is in New England or even at Saranac. This is a most important consideration. While the altitude is dangerous or harmful to some patients, there is absolutely no doubt that for those able to stand it, it is of immense help. As far as the comparative isolation is concerned, there is a certain class of patients to whom separation from friends and relatives is a great advantage and who rather relish the independent Western life. All these pros and cons must be carefully weighed and balanced one against the other in considering each case. The cost must always be borne in mind. Many people have been cured in the West and many have been hurried into a premature grave by going there. Do not go West unless

!! (a) You are assured by competent medical advice that your heart will stand the strain and that the climate is suited to your individual case.

(b) You have \$1000 in cash to spend on proper food and lodging.

(c) You know of some good doctor and have a letter to him containing all details of your case.

! Above all, remember that even if you go West and do well there, you may never be able to come back to the denser air and lower altitude of the East. For further details as to sanatoria, etc., write to the sources previously mentioned.

## CHAPTER XII

### AFTER THE SANATORIUM, THEN WHAT?

A properly conducted sanatorium, public or private, should prepare the patient for continued treatment or work after leaving the institution. Sanatorium treatment is as much for the future as for the present. To gain ten or twenty pounds in weight, to lose cough and sputum, etc., is evidence that the progress of the disease is checked. But unless the lessons learned at the sanatorium sink deep into the patient's mind and unless he fully realizes that a few months at a sanatorium never really cured consumption, the gain he has made will soon be lost and the money he has already spent on himself will be wasted. Therefore, long before the patient leaves he should begin to think ahead and plan for the future; he should consider the feasibility of outdoor sleeping at home and should be making inquiries for proper work or occupation. He should consult his physician in regard to all these plans, especially as regards rest and exercise. Mere fat is of no special value. A certain amount of increased weight is advisable, but this should be as much muscle as fat. Exercise in gradually increasing amounts should be taken until at time of departure

the patient is in good physical condition. It is well for the patient to bear in mind that a period of "post-sanatorium depression" is apt to follow the departure from the sanatorium. The sudden freedom from supervision, rules and regulations, the doubt as to the future, which is often present in his mind, and the suddenly acquired burden of new responsibilities may cause a sort of mental panic. This lasts only a short time, and then passes away permanently.

The question is sure to come up as to what sort of work is best to do, and whether or not the patient should go back to his old occupation. This depends largely on the following:

(a) The condition of the patient and of his lungs. If the disease is still active, hard work of any kind is of course out of the question.

(b) Exactly what the occupation he wishes to pursue involves as to hours, physical or mental strain, etc. In other words, is it one of the so-called "dangerous trades," owing to dust, fumes, long hours, exposure to heat and cold, etc.?

(c) How the rest of the twenty-four hours during which the patient is not working is to be spent. I have often allowed a patient to return to his former occupation, even if it were not a favorable one, on condition that he could sleep outdoors at night and during the rest of the day live under good hygienic conditions.

(d) The financial situation and the difficulty in getting another job. When a patient is so situated

that it involves no hardship for him to give up his old trade and seek a new one, even if he has to wait for it and then work at lower wages, it is certainly better to advise this course of action. But this is rarely the case. In the majority of instances, it is essential for the patient to get back to work and earn some money as soon as possible; likewise it is usually quite impossible for him to start in all over again and learn a new trade. It is a common thing for doctors to tell their patients to "get a light outdoor job." It would be a good thing for these doctors to try for themselves to secure an outdoor job suitable for a consumptive or an ex-consumptive. Then they would not give such useless advice. An outdoor occupation is an excellent thing if it can be found. Most patients must get well without one, however.

*Medical Supervision.* There is no time when there is more need of sound medical advice than during the first six months or year after leaving the sanatorium. Most patients are only too anxious to leave behind them every trace of things medical. This is a dangerous course to pursue. Every patient should go to his own local physician at once after leaving the institution, and should report to him regularly once a month during the first year and once every two or three months for several years. He will find the money thus spent in doctors' fees an excellent investment. The patient who does not do this runs a grave risk of having an early relapse.

## CHAPTER XIII

### OCCUPATIONS FOR CONSUMPTIVES

The title of this chapter is somewhat of a misnomer. As I have said before, the best occupation for a consumptive is that of getting well, and yet there comes a time when it is often necessary and indeed perfectly safe for a patient to stop taking active treatment and to start doing some kind of work. At the Massachusetts sanatoria certain worthy patients on their discharge from the institution are placed on parole. This means that they will keep in touch with their doctors and upon the slightest sign of a relapse will be readmitted to the sanatorium without delay. It would be an excellent thing if every patient when he leaves off taking active treatment at a sanatorium, health resort or at home, should consider himself as on parole and should so keep in touch with his doctor and watch himself with such care that he will recognize the first warning of an impending relapse and resume treatment again before it is too late. Such a course on the part of patients would save many lives and much hardship.

Of all the hard questions that patients ask their physicians there is none more difficult to answer than that concerning the occupation which it is safe

for them to take up, and yet it is a most important question, upon the answer to which the future welfare of the patient may depend. Until comparatively recently, as stated above, the doctors were apt to tell their patients to get a light outdoor job. It goes without saying that such jobs are very scarce. Usually the problem narrows itself to this: Is it safe for the patient to go back to his old occupation or should he endeavor to start in anew and learn a new and perhaps more suitable trade? Of course each case must be judged on its individual merits, yet there are a few general principles which may well be considered. The first depends upon how the patient can spend that part of the twenty-four hours when he is not working. As a general rule, if the patient can sleep out of doors or under conditions approximating this, in a locality outside of the thickly settled districts, I usually consider it safe for him to go back to his old occupation even if this involves keeping him indoors practically all the time. Much depends, of course, upon the nature of the old occupation. Trades are considered as dangerous or otherwise, depending upon the nature of the work and the conditions under which it is carried on. The mortality from tuberculosis in stone-cutting, certain phases of iron- and steel-grinding trades, in the manufacture of jewelry, etc., is so high that under no circumstances would I willingly allow a patient of mine to return to such a trade, even if the pay was good and he could support his family com-

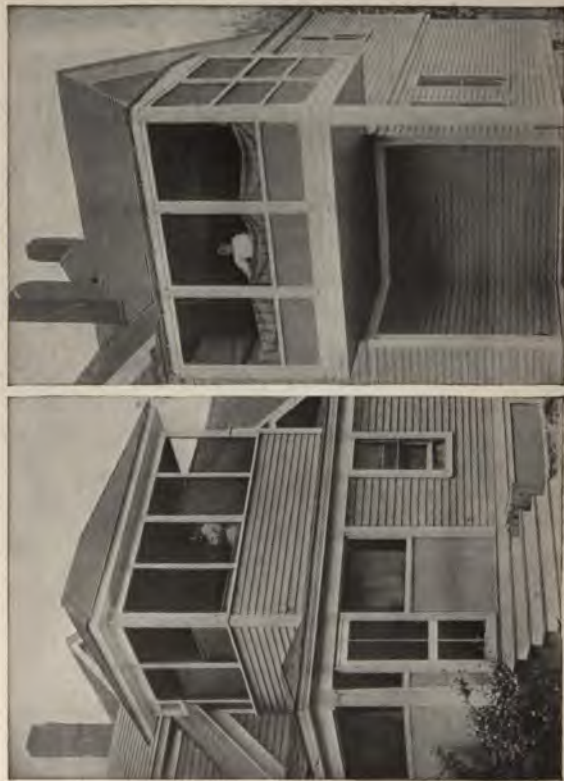


fortably by so doing. I should consider it a far better investment in the long run for him to learn some other trade or to take up some other occupation even if in dollars and cents it meant a very meagre return. Trades involving severe physical exertion likewise may be classed as trades dangerous to the consumptive although perhaps not dangerous to normal individuals. I should be quite unwilling, for instance, to allow a man who had been engaged in freight-handling or in some other arduous occupation to resume this trade after leaving a sanatorium, even though it kept him out of doors the entire day. I should much prefer to have such a man take up some milder work indoors or under less favorable surroundings.

Thanks to the development of modern methods of transportation in general and to Mr. Henry Ford in particular it is now possible for people whose income is very small to live in the country or at least outside the cities where they can sleep out of doors and have fresh air and sunshine around them and yet keep at their regular work in the city. This makes our problem much easier than heretofore. Such jobs as chauffeurs, running delivery wagons, canvassing, forestry, raising of poultry, market and truck gardening, etc., are excellent ones and their number is increasing from year to year. The fact remains, however, that the great bulk of patients who have had consumption will not be able to get such work as this but will have to return to their old trades or else learn a new one.



Pavilion.—North Reading State Sanatorium, Massachusetts



Two sleeping porches, one built over the roof of a back extension and the other built in a corner of the house

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The solution of this problem rests not with the patient but with the patient's physician. If the doctor, upon being asked this question, gives merely vague and general advice and is unable or unwilling to go into details, the patient by all means should select a physician who will take up the problem as an individual one depending upon the circumstances of the individual case.

## CHAPTER XIV

### TUBERCULOSIS IN CHILDHOOD

Tuberculosis has been called a true children's disease. This is because in almost every case infection with the germ of tuberculosis takes place in childhood. It is an amazing state of affairs, but undoubtedly true that by the time a child reaches his fourteenth year he has already become *infected* with tuberculosis. This does not necessarily mean disease, as before stated; there is, fortunately, a vast difference between tuberculous infection and tuberculous disease. The first simply implies that somewhere in the body, causing no symptoms in the present and very likely to cause none in the future, there exists, tucked away in some gland or elsewhere, a tiny focus of tuberculosis. That this occurs has been proved by countless autopsies and other scientific investigations. The fact that the majority of us are well and strong and yet harbor these germs somewhere in our body is sufficient evidence that tuberculous infection does not necessarily mean sickness.

*Tuberculous disease* should be applied to the condition when these germs are no longer latent and inactive, but are causing symptoms. These symptoms

in childhood are usually different from those in adults for the reason that actual disease of the lung itself is rare and occurs only in the late stages when the diagnosis is evident. In the early stages the process is confined to the lymph nodes, especially those at the root of the lung in which case the condition is called "bronchial gland tuberculosis." The only local symptom which parents should know is a peculiar paroxysmal cough like that of whooping cough. The important symptoms are the "constitutional" ones. The more important constitutional symptoms are:

- (a) Loss of weight or strength or failure to gain in weight and vigor.
- (b) Debility, languor, listlessness, undue fatigue.
- (c) Pallor or anæmia.
- (d) Slight fever.
- (e) Frequent colds without adequate cause.
- (f) A poor or capricious appetite.

Remember that while other things may cause each and all of these symptoms, that tuberculosis may and often does cause them. Take the child to your doctor and have him examined. If he fails to gain or gets worse, consult a specialist or go to a special dispensary where the child can be seen by experts in this line. Do not attempt to diagnose or treat the child yourself. Do not put off going to your doctor, but do so *at once*.

## CHAPTER XV

### NON-PULMONARY TUBERCULOSIS

For many years a curious distinction has been drawn between tuberculosis of the lungs, pulmonary tuberculosis, and tuberculosis of other parts of the body, non-pulmonary tuberculosis. The latter has been mistakenly called "surgical tuberculosis" because it was considered that this form of the disease should be treated by the surgeon and by surgical procedures, although it is exactly the same organism which causes the disease in the lungs and elsewhere in the body. When a person was known to have consumption, or tuberculosis of the lungs, he was usually put under the best of treatment, given fresh air, sunshine, good food and whatever else necessary to check the disease. When, however, the germs of tuberculosis attacked the glands or some part of the body other than the lungs, the surgeon was at once called in and an operation usually performed, while all idea of giving the patient the fresh air, sunshine and other hygienic measures which he needed was entirely neglected. To a large extent, unfortunately, this difference still holds true. It is of the utmost importance, therefore, that every one should get a clear and correct idea in regard to this subject.

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In each case it is essential to remember that we must treat the patient who happens to have the disease, and not the disease, itself. One method will lead to success and the other is very likely to lead to failure.

The child with enlarged glands in his neck or the adult with tuberculosis in the kidney or the schoolboy with a tuberculosis process in the ankle, hip, knee, or elsewhere may, and doubtless does, require a certain amount of surgery, but he certainly requires a large amount of the same treatment which restores the consumptive to health and which kills the germs that are causing his disease.

Take for example tuberculosis of the glands and of the neck. This is sometimes called tuberculous cervical adenitis, or by the older name, scrofula. Such enlarged glands in the neck are very common in children as any parent can testify after a bad cold or almost any acute infection of the nose, throat or mouth. The germs go from the throat or mouth to the glands in the neck and cause them to enlarge.

In such acute cases as this the enlarged glands are not due to any tuberculous disease. The enlargement will usually subside and disappear entirely if left to itself. When, however, these enlarged glands do not subside, but keep on for one or two months, they should be carefully investigated. They may not be tuberculous glands but they are very apt to be so, and in the majority of cases are due to a tuberculous infection.



The first principle of treatment of such enlarged glands as these is to prevent the entrance of any more germs. This simply means that the child's teeth must be thoroughly cleaned up and filled and old decayed stumps if present extracted, and the tonsils and adenoids removed even if, on examination, they may not show any signs of disease. Other sources of infection, such as running ears or nose or diseases of the scalp, must be properly attended to.

The next important factor in tuberculosis of these glands is to put the child under the best possible hygienic surroundings, with fresh air, sunshine and proper food, and to treat him in other ways just as if he had tuberculosis of the lungs. An operation of some kind may be and often is necessary at one time or another, but it should be remembered at all times that in this form of tuberculosis a surgical operation is but an incident in a course of treatment, the most important parts of which come before and after the operation. The question of giving the child tuberculin is purely a medical one and need not be entered into here.

! } While it is not true that these forms of non-pulmonary tuberculosis actually lead to consumption, the reverse likewise is not true that they in any way protect the child against tuberculosis of the lungs. Tuberculosis in any form whatsoever, and in any part of the body, is an unwelcome guest whose departure should be hastened as much as possible.

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All of the details mentioned above should be carried out under the strict supervision of a physician. If, in such cases as these, the physician merely recommends a surgical operation and nothing further, it is high time for the mother to take the child to another doctor who will take the broader point of view. The physician alone, however, can do comparatively little. He can direct and guide. The actual carrying out of his instructions and the great burden of the work must be performed by the patient himself or by those around him at home.

## CHAPTER XVI

### HOW PARENTS CAN HELP IN THE PREVENTION AND CURE OF TUBERCULOSIS IN CHILDREN

Remember that in the case of children as in adults, good health should come *first* always. This is especially true in children. In a few cases adults can take risks and often have to do so, and continue at their work although in poor health. With adults the doctor often has to compromise and demand only such measures as can be carried out along with the patient's regular occupation. In the case of children there should be *no compromise*. Except in crowded city districts, the ailing child should be at once removed from school and "put out to grass," i. e., made to live out of doors in fresh air and sunshine. In the large cities, where there is little or no opportunity for fresh air and sunshine, unless he can be sent out into the country, the child should be sent to an open air school or some such institution. Always remember that health comes first, and that schooling is purely secondary.

Outdoor sleeping is hard to arrange for children unless there is a separate house in the country or suburbs, where a suitable sleeping porch can be arranged. The details of how to sleep outdoors have



1. How to wrap a patient in a chair. The reclining-chair is first overlaid with a rug or a comfortable, and double blankets extended their full length, leaving the free ends on the floor. Loaned by the Journal of the Outdoor Life.



2. How to wrap a patient in a chair. After seating yourself, draw up the free ends of the blanket and tuck in at the sides. A steamer rug is placed over all. Loaned by the Journal of the Outdoor Life

already been given in a previous chapter. Sunlight is a healing power of great value. Exactly in what way it acts we do not know, but we do know that exposure of the child's body to the sun's rays is of great benefit, even at low altitudes where the air is not so rare and pure as in the mountains. It is only comparatively recently that "sunlight treatment" or "heliotherapy" has been carried on to any great extent. It is bound to become more widely used as people realize its benefits. It should be carried on only under a physician's direction.

The *diet* should be carefully supervised. In feeding children, as with adults, bear in mind that it is what can be digested and is digested and assimilated and not that which is taken into the stomach that is of value. Three meals a day, with a glass of milk at each meal, and if the child is below weight, light lunches in the middle of forenoon and afternoon, is the basis of diet in such conditions. No tea or coffee should be allowed. Be sure the teeth are in good condition. Take the child to the dispensary or the dentist and have this attended to.

Cold sponge baths every morning down to the waist, followed by a brisk rub down in a warm room are of immense value. Do not have the water any colder than the temperature at which the child will react and get in a warm glow after bathing. If there is no reaction and the child is cold and blue, the water has been too cold. The rubbing afterwards with a rough Turkish towel is as important as the bath itself.

Remove the child from all possible sources of infection. If there is or has been a case of consumption in the family or house, send the child away if possible. If there is definite disease of the *lung itself*, the child should be sent to a hospital or sanatorium, and should *not* be kept at home. There are not many institutions where such children can be sent. Massachusetts and New York are fairly well provided. Information about them can be obtained from the sources mentioned above.

Many doctors advise exercises, calisthenics, etc., for this type of children. They are apt to be thin, "scrawny," round-shouldered and stooping. Under proper conditions a few simple "setting up" exercises are of benefit. But it is easy to carry this on too enthusiastically and to do harm instead of good. These should never be allowed except when ordered by a physician. It is well to remember that round shoulders and flat chests often result from a general weakened condition. Under such circumstances it is *rest* outdoors, good food, and always more *rest* which will build up the child, restore vitality and energy and allow him to sit up straight of his own accord. Chest exercises, therefore, should be allowed only when the child is well and strong enough to afford the spare energy necessary for their performance. It is far better to emphasize rest in all such cases rather than exercise. Above all things, remember that questions concerning exercises and other matters should be decided by the physician and not by parents or relatives.

## CHAPTER XVII

### FRESH AIR ROOMS AND OPEN AIR SCHOOLS. WHAT THEY ARE AND WHAT THEY ARE FOR

The school children of to-day are the men and women of to-morrow. The weak, sickly, anæmic children of to-day are the consumptives of the next generation. The movement for fresh air rooms and open air schools is simply an expression of a growing public sentiment that children need and must have more fresh air and sunlight if we expect to have them grow up into healthy adults. Scientists can prove to their own satisfaction, perhaps, that the air forced into school rooms by some elaborate and expensive system of artificial ventilation is pure and fresh and just as good as the air that comes in through an open window; facts demonstrate that this is not so and that no amount of "baked" air equals that which comes into the room unimpeded and in its natural state.

At the present time there are two great classes of children who need treatment in fresh air rooms or outdoor schools. The first and smaller class consists of those children whom competent medical authorities have declared to be not only tuberculous but to have tuberculous disease in active form.



These children are sick children. They belong in a sanatorium or hospital where health is the prime consideration, and not in a school. For them schooling is a very secondary matter. The New York sanatorium at Stony Wold and the Massachusetts sanatorium at Westfield are institutions of this type, sanatoria in every sense of the word, but provided with outdoor schools for children able to attend them. There are many smaller institutions of the same kind in or near the large cities in this country and abroad.

The other class consists of those children under weight, often underfed, poorly nourished, pale and run down, who, while they doubtless are already *infected* with tuberculosis, have no evidence of *active* tuberculous *disease*, and who need good food, proper hygiene, and fresh air to make them well and strong. The distinction between these two classes is often hard to make because one merges into the other. It is important to realize the difference, however. It is for these children that fresh air rooms are intended. Such a room may be simply one room in a schoolhouse set aside for this purpose, where the windows are either taken out or kept open, or it may be a shack, tent or pavilion actually out of doors. The children are adequately clothed to stand the cold weather. Lunches, simple, nourishing and cheap are provided at cost or free to those who cannot pay. A certain period each day is set aside as a rest hour. Home conditions are investigated. The interest of the

parents is aroused so that both children and parents learn the value of fresh air and the rules for right living.

The result in increased mental and bodily vigor of these children is amazing. Such schools have not been in existence long enough nor are there enough of them as yet to show any appreciable effect on the tuberculosis death rate or on the general health. In a few years this effect will be clearly seen. By that time the public will realize what those who have studied the subject now do,—that *all children* whether well and strong or weak and sickly, should go to school and study in fresh air rooms and that it is folly to wait until the child becomes run down, sick and infected with tuberculosis before he is given decent conditions at home and at school. This is to be the next great step in advance.

## CHAPTER XVIII

### CONSUMPTION AND MARRIAGE. WHAT SHOULD CONSUMPTIVE PARENTS DO ABOUT THEIR CHILD- REN?

The question as to whether or not a consumptive should marry is one that frequently arises and is very hard to answer. No definite ruling one way or the other can be made. Each case must be decided on its individual merits, depending on the age of the patient, activity of the disease, finances, and other conditions. As a general thing such marriages should be discouraged unless matters have reached a stage where breaking off an engagement would do more harm than good. Certainly no young couple should marry, if one has consumption, unless every detail as to present and future plans are clearly and plainly talked over between the two parties. If the disease is active and there is no immediate prospect of its arrest, marriage should be postponed indefinitely. On the other hand, if the process is a chronic one and one that the physician believes to be compatible with a long and useful, although perhaps a semi-invalid life, there is no reason why there should not be a marriage, provided, as above stated, that both the man and the woman in the case

are fully prepared to live according to what the disease demands and *are financially able to do so*. Much depends on the intelligence of the contracting parties. I know of many patients whom I should not allow to marry under any circumstances if I could help it, even though in the incipient and favorable stages; while on the other hand I know of many more with chronic advanced or moderately advanced tuberculosis, whom I would willingly allow to marry. After all, in these cases it is fortunately or unfortunately true, according to the point of view, that only rarely will serious weight be given to any doctor's advice on this subject.

Again the question is bound to arise as to whether there should be children from such marriages. If it is the husband who is consumptive, I can see no reason why there should not be children providing, of course, all possible safeguards are taken to prevent the child's becoming infected; if, however, it is the wife who is afflicted, this matter should be given the gravest consideration. Husband and wife should both remember that pregnancy with its attendant strain on all a woman's vital forces is the cause of more breakdowns and relapses among women than anything else; that many, many tragedies have resulted from this cause; that tuberculous disease that has been quiescent and free from all symptoms for months or years previous may again become active during pregnancy and the months following child-birth. If it is decided to take this risk, the most watchful care on the part of the phy-

sician and the closest co-operation between wife and physician is necessary to prevent disaster. Under certain conditions it is right and proper to terminate such pregnancy. This, however, is a medical question only and need not be entered into here.

If one or both parents are or have been consumptive, what is to be expected of the children resulting from such a union? Remembering that tuberculosis itself is *not* inherited, but that a lessened resistance or lowered vitality *may be* inherited, the parents need have no worry as to the outcome *if* they bear these facts in mind and act accordingly. Knowledge of what may be transmitted from a tuberculous parent carries with it the power to ward off future trouble. Such children should not be nursed if the mother has active tuberculosis, but should be weaned at once. They should be brought up with the utmost care, not coddled or protected from fresh air, but living in it night and day. They should be protected from every source of contagion and should be examined regularly and frequently by a competent physician. If the child is reared under such conditions as these, his parents need have no fear, as far as tuberculosis is concerned, that he will not be as strong and well as any other child whose parents are apparently perfectly well and strong.



How to make a sleeping-bag with the bed-clothes. First tuck all covers except the top blanket under the bed-pad, and then tuck the top blanket under the mattress. Loaned by the Journal of the Outdoor Life



An Emmanuel Church class patient taking the open-air treatment in a back yard of a Boston tenement

## CHAPTER XIX

### THE PROBLEM OF PAYING THE BILLS IN CONSUMPTION AND HOW THEY HAVE BEEN SOLVED

Tuberculosis is a chronic disease; it takes time and money — plenty of both — to cure it. Whether the patient and his friends are able to pay the bills, or whether they are paid by the state, city or private charity, *some one* has to pay the board and other expenses. Usually it is the taxpayer who foots the bills; some day the public, who now pays the bills, will realize that it is far cheaper to prevent consumption than it is to try to cure it.

The consumptive, unless he is very well off, should put away all pride. Only the wealthy have a right to pick and choose the exact sanatorium, climate and situation that they want. Most of us cannot do this, but must be content with what we can afford. Many patients are unwilling to go to a state sanatorium because they are not, as they say, "charity patients." This is all nonsense. In our state sanatoria patients are not officially pauperized by entering on a free basis. True, if a patient says he is unable to pay, his case is investigated by state or local authorities to make sure of the facts. This, however, does not pauperize him. Free treatment



at a state or local sanatorium is on the same plane as our public schools and our police and fire protection. No one, even the poorest, would claim he was pauperized by not paying for education in the public schools. Tuberculosis is a great social and economic problem and one that society and the public must handle. For these reasons, then, when a person has consumption and must go to a sanatorium for an extended stay, he should face the financial side in a practical and sane manner. If he can afford \$10 to \$18 a week at a private or semi-private sanatorium for a long while, well and good; if he can pay only \$4 to \$5 a week, the usual cost for those who can pay at a state sanatorium, let him face the situation cheerfully. He should realize that comparatively few can go to private sanatoria and that he can get well just as quickly in the bigger and less expensive institution. If he is so situated that he cannot afford to pay for his board, let him say so frankly to the proper authorities. In Massachusetts institutions, at least, the patient who can pay his four dollars a week or more receives exactly the same treatment in every detail as his less fortunate fellows who can pay nothing. There is no more important point to remember. In many cases, the vast majority, immediate treatment is highly desirable. Not only from the point of view of the patient's physical welfare is this a good thing, but also it is far easier for the patient to do something at once, to take some radical step while

the doctor's advice and warning is fresh in his memory, than to wait one or two months before so doing. Unfortunately in Massachusetts and I believe elsewhere, there is a long waiting list for all the state sanatoria, so that the patient must wait one, two, or even three months after he has filed his application before he can be actually admitted to the sanatorium. For many reasons, therefore, it is important to bridge over this gap. Under such circumstances I have advised many patients to go *at once* to a private sanatorium, even at a cost of \$10 to \$15 or more per week. While these patients could not possibly pay at such a rate as this for any length of time, many of them are able to do so for a few weeks. It is really the economical plan, because in most instances a few weeks of immediate treatment, even at increased cost, will be more than saved by the decreased length of stay in the sanatorium later on. The following brief reports of cases are those of actual patients, each of whom presented a definite financial problem which was satisfactorily solved.

A. A woman with two small children, whose husband earns \$2 a day, with no money saved, was found to have moderately advanced consumption. The children were sent to board with the grandmother, after having been examined themselves. Application was made for admission to a state sanatorium and in the meantime the patient was admitted to a local hospital, the House of the Good Sa-

maritan. Five weeks later her name was reached on the sanatorium list and she was admitted on a free basis. She is now doing well.

B. A young clerk, single, with no one dependent on him, earning \$15 a week, had incipient phthisis. He had \$200 saved up. He was sent at once to a private sanatorium in the village of Rutland at \$14 a week, and application was made for the Rutland State Sanatorium. When his name was reached on the list he had done so well that he preferred to remain where he was, even at increased cost. At the end of two months he left the sanatorium, moved his quarters outside the city to a suburb where he now sleeps out of doors. At the end of six months he was able to go back to work, his employers having kept his position open for him.

C. A young boy of ten years, whose mother was a washerwoman, a widow, earning \$10 a week, had been ailing for some time. The diagnosis of "bronchial gland tuberculosis" was finally made and sanatorium treatment advised. Application was made for the Westfield State Sanatorium, Massachusetts, where children are taken. In the meantime, as there was no hospital or other institution to which he could be temporarily admitted, his home conditions were investigated in detail, his mother instructed as to how to take care of him, extra milk was supplied from a local diet kitchen, while the boy himself came weekly to my clinic at the Massachusetts General Hospital. After two months' waiting, during which time he improved rapidly, he was

admitted to the state sanatorium, where he is now.

D. A young bank clerk, with a good position bringing in \$20 a week, but no savings, came down with acute early tuberculosis. His wife was soon to have a baby. The couple had lived up to their income in an apartment in the suburbs. The problem was a difficult one, involving not only the husband but the wife, who had no place to go. After considerable effort the officers of his bank agreed to continue the patient's salary for two months. The patient was admitted to the Prendergast Camp, an institution receiving at low rates patients near Boston, who later expect to enter a state sanatorium. The wife lived at home and when the time arrived for her to be confined, was sent to a local lying-in hospital free of charge. After she left this, her husband insisted on coming home and refused to consider going to a sanatorium of any kind. He was therefore persuaded to join a "tuberculosis class," arrangements for outdoor sleeping were made, and he is now carrying on the home sanatorium treatment and doing well. In view of the young baby and the condition of the mother, it would have been far better if the patient had gone to a sanatorium until entirely cured; as this was impossible, the next best course was followed.

## CHAPTER XX

### DRUGS AND CURES FOR CONSUMPTION; THEIR USE AND ABUSE

All nostrums, quack remedies, widely advertised "cures" for consumption, may be condemned at once. Leave them alone, no matter how glowing may be the reports you hear concerning them.

The question as to the advisability of allowing in moderation, or occasionally, alcoholic drinks, such as beer, ale, porter, port wine, etc., is often raised. While in rare cases I allow or even advise patients to take a little beer or its equivalent with their dinner, it happens so infrequently as to be negligible. It is far better to leave all such things alone. They are not "strengthening," as our friends are so apt to assure us when they present us with bottles of port wine, etc. The feeling of well being that results is a very temporary one and does no good. Especially would I condemn the much overworked "egg-nog." This has its place in acute conditions, but not in tuberculosis.

Creosote and similar nauseating drugs not only do no good, but much harm. I will not prescribe them for my patients nor take them myself. Cod liver oil and emulsions are widely advertised, if not

as cures, as potent agents in helping to bring about a cure for consumption. It should be borne in mind that such preparations are merely forms of fat and as such have some value. The taste is usually very disagreeable. Children often do not mind taking cod liver oil and occasionally relish it. If they are under weight, extra fat is a good thing. There are no special curative properties in oils and emulsions. Personally I have never prescribed cod liver oil or an emulsion. If my patients need increased fat in their diet, I prefer them to take it in cream, butter, salads, and in other fatty foods.

*Tonics*, hypophosphites, etc., should only be taken when prescribed by a physician.

*Serums* and *vaccines*, etc., likewise should be allowed only under rigid competent medical supervision.

*Inhalants* of various kinds often help throat conditions and relieve annoying coughs. They never have cured tuberculosis, however.

As a general rule, the fewer drugs or artificial foods or preparations of any kind are taken, the better for the patient.

## CHAPTER XXI

### DIET IN CONSUMPTION

A good digestion is the sheet anchor in the treatment of consumption. It is what is digested and not what is eaten that counts. A tired and overworked stomach cannot take care of food, no matter how nourishing or attractively served.

The days of "forced feeding" are past. We no longer try to put 20 to 30 pounds on the patient, urge him to eat all he can and as often as he can, and congratulate ourselves when at the end of six months he is fat, plethoric and short-winded. This has done much harm in the past. Each patient presents an individual problem as to diet and feeding. As a general rule I like to have my patients put on about ten pounds over the weight which they consider normal. In fat patients it is often wise to reduce weight; thin ones should be given more food.

Remember that there is nothing of any *specific* value as far as tuberculosis is concerned in milk or eggs. Milk is a good nourishing food and so are eggs, but no one with a chronic disease will benefit by living on this diet to the exclusion of other articles of food. Eggs and milk should be taken separately, never as "egg and milk," "milk shake," or



A cheap temporary porch protected by an awning and supported by braces  
set at an angle





A cheap porch protected by awnings, built on the roof of a first-story veranda

"egg-nogs." I usually advise my patients to take three square meals a day and in addition one quart of milk. A quart of milk makes about six glasses. These are to be scattered through the day with and between meals. Substitute a raw egg for a glass of milk if you wish to, or better still, take a raw egg after your meals if extra food is desirable. Some people take raw eggs without any "fixings." Most persons break the egg in a cup and add a little lemon juice or salt, pepper and vinegar. Countless patients have told their doctors that they cannot possibly tolerate either milk or raw eggs. Persons undoubtedly do exist whose stomachs will not take to either eggs or milk, but they are exceeding rare. Usually it is merely a fad or a fancy on the part of the patient and the sooner it is got rid of the better.

The question of appetite, or rather the lack of appetite, is often a perplexing one. As a general thing, it is safe to regard an appetite as a luxury belonging to well people. A lack of appetite in consumption is simply a symptom of the disease; this the patient should remember and also that he must eat even if he does so without much enjoyment. This brings up a most important point in feeding not only consumptives but all such people, namely that a little food attractively and daintily served will do far more good than much larger amounts piled on the plate. The patient's friends, nurse or attendant can spend time and energy to no better effect than by studying this subject, preparing dainty meals and in seeing to it that each time

the patient is given his tray or sits down to the table for a meal, the food before him is small in amount and attractively served. Too small helpings are far better than too large ones. It is infinitely better for the patient to say, "Is this all I'm going to get? I know I'll want some more!" than "Oh, dear, I can't possibly eat all this!" These may seem like small points; they are really very important ones, however. In regard to the diet itself, as long as it is simple and nourishing, there is little to be said. If the patient is under weight, plenty of fat in the form of butter, etc., is desirable. Salads of all kinds with French or mayonnaise dressing are excellent. Fresh fruit is sometimes apt to cause upsets and should be taken only in moderation. Regularity at meals is essential.

Rest is needed for the stomach just as much as for any other part of the body. The stomach is simply a bag of muscle which, like the other muscles, is apt to be flabby and weak when there is active tuberculosis present in the body. For this reason it is advisable for the patient to take one-half hour's rest before and after each meal; before meals so that the stomach is in good condition before any food is put into it and after meals so that all the patient's strength and energy may be devoted to the subject in hand — that of digesting and assimilating food.

The number of times a patient should eat depends on circumstances and in its final analysis should be decided by the physician. As a general rule, there

should be three regular meals a day, with light lunches at 11 A. M. and 4 P. M. Such lunches should be daintily served and may consist of a glass of milk, broth, cocoa, a sandwich, crackers and cheese, etc. If it is found that these lunches prevent the patient from eating his regular meals, they should be reduced or given up altogether. Be guided by common sense and not by cast iron rules in this as in other matters.

There is no part of the treatment of the consumptive in which the patient's family, nurse or attendant can do more good and can really help more to bring about a cure than by faithful, painstaking attention to the details of feeding the patient.

## CHAPTER XXII

### HOW TO KEEP FROM GIVING CONSUMPTION TO OTHERS

Tuberculosis is a contagious disease. It is not so highly infectious as scarlet fever, measles, smallpox, etc., but nevertheless, it is classified with them as a disease "communicable and dangerous to public health." As before stated, it is spread from one person to another by the germ of tuberculosis in the sputum or other discharges. How to live so as not to endanger those about him is the great and fundamental lesson every consumptive must learn. The sputum is the chief means of the spread of tuberculosis from one person to another. Were all the sputum destroyed, it is safe to say that there would be very little more consumption. Destruction of all sputum, then, is essential. This may be done in various ways, depending on the amount which is raised in the twenty-four hours. If this amount is slight, paper napkins serve the purpose admirably. The patient is provided with an ample supply of paper napkins and a large paper bag. Each time a napkin is used to collect the sputum it is placed in the bag. At night the bag and its contents is burned. If the patient prefers, small squares of cheesecloth

may be used in place of the paper napkins. This of course is slightly more expensive. When the amount of sputum is greater, this arrangement will not do. In such cases, paper sputum cups should be used and the entire cup burned when filled. These cups vary in size and price. They are so well known and so easily obtained as to need no description.

The patient and his family must always bear in mind that sputum in even the smallest amount is dangerous. Therefore, whenever the patient coughs or sneezes, a handkerchief or napkin must be held in front of the mouth. The patient should kiss no one. Scrupulous cleanliness of face, mouth, teeth and hands is necessary. Eating utensils should be boiled after using. It is not necessary to mark the dishes conspicuously, but it is certainly safer for the patient to have his own knife, fork and spoon, plate, etc. As to clothing, everything which can stand it should be boiled. Bed clothes, blankets, spreads, etc., should be hung outdoors *in the sun*, if possible. All unnecessary floor and wall coverings should be removed from the patient's room, and the furniture should be of the simplest.

Before allowing others to use a room previously occupied by a consumptive, the room should be thoroughly cleaned. Formalin and other chemical disinfectants are not so good as mechanical cleanliness. Information as to how to have this form of disinfection done, however, can be obtained from the local or state board of health. The floor and the walls up to at least four feet and more, if possi-

ble, should be *scrubbed*. To be absolutely safe the floor might be painted and the walls painted or repapered. The patient's room, the sleeping porch and piazza should be screened and every effort made to get rid of flies, as they have been repeatedly shown to be carriers of the germs of tuberculosis.

Constant watchfulness is the price of safety. Well and strong adults need not seriously worry about getting the disease, but children and young adults, particularly if they are in any way physically below par, are extremely susceptible. It is far better to send all such persons away from the immediate environment of a consumptive, be he ever so careful. If conditions are such that this is impossible, the greatest of care must be used.

## CHAPTER XXIII

### GENERAL REMARKS

Fear of consumptives and consumption,—“phthisiphobia” as it is called, in its proper sense, means a wholesome respect and dread of the disease and a keen realization of its dangers. Carried to excess this feeling has done much harm and caused much unnecessary suffering. Fortunately it is growing constantly less. The person who lives and sleeps outdoors is no longer a marked individual, because outdoor sleeping and living has become so popular. In addition to this, the public is beginning to realize that every one is more or less exposed to the disease and that the average strong and healthy adult, living a sensible, hygienic life, need not fear the careful consumptive. It has been clearly demonstrated that the standard of health of doctors, nurses, and attendants in tuberculosis sanatoria or resorts is higher than elsewhere and that their death rate from consumption is lower. For these reasons remember that while the consumptive is a sick person, he is not necessarily to be shunned and ostracised as is so often done.

Remember also, that the consumptive is sick; that he is not himself, owing to the poisonous toxins in



his system. He is apt to be fretful, irritable and easily upset by little things. While it is often the kindest course to be firm with the patient, the utmost gentleness, patience and tact are necessary at all times. In my own experience I have not found that the "spes phthisica,"—"the consumptive's hope and optimism,"—is so often present as gloom and despondency, with an ever present tendency to look on the dark side of things. This must be constantly combated.

Remember that the consumptive, just as much as a well person, needs a change of scenery and surroundings once in a while. There should be occasional shifts in the nursing force; a different room may well be used, or the arrangement of the room altered. Best of all is a more radical change to a different locality or climate. In the Massachusetts sanatoria there is a constant shifting of patients who have stayed many months at one institution and who seem to have reached a stationary condition, getting neither better nor worse, to another sanatorium in a different part of the state. This often brings about a remarkable improvement. It is, of course, no reflection in any way on the institution the patient has left.

In the early stages of treatment, when absolute or nearly absolute rest is indicated, a strict medical atmosphere is an advantage. The patient must be made to realize that he is sick, just as one with typhoid fever or pneumonia is sick. This is necessary in the beginning. But later on, when he has



A lean-to tent shelter on the roof of an apartment house in New York City.  
Arranged by Mr. Frederick D. Greene



A simple wooden shack for a family of three which can be constructed on the roof of a tenement house or in a yard. Planned by Dr. H. E. Kirschner for the Oil City, Pa., Sanatorium

learned how to live and to recognize symptoms and their significance, it is well to eliminate the medical side as much as possible. It is perfectly possible, I believe, to keep a patient too long at Saranac Lake. It is hard to forget the disease while there. Patients will discuss their symptoms and compare progress with other patients, much to the disadvantage of each. When this stage is reached (and the physician is the one to decide this), make some radical change. There is a condition known to tuberculosis workers as "post-sanatorium neurasthenia." The patient has become so introspective while at the sanatorium that he constantly watches every symptom and is unwilling to do anything to help himself in any way, although perfectly able to do so. This is an unfortunate and quite unnecessary state of affairs.

*Consumption is curable.* This was the slogan of our warfare against the disease ten years ago. At the present time, while consumption in its early stages we all know to be curable, we are more conservative in speaking of its curability in later stages of the disease. Consumption is preventable always and curable often. What constitutes a cure in consumption? This is a hard question to answer definitely. In my own work, I am unwilling to call a patient cured until he has been at least three years without symptoms, without signs of any *active* disease in the lungs or elsewhere and able to lead a normal life. The term "arrested" is the safer one to use. This simply means that while there may be

signs of extensive and fairly active disease in the chest, often accompanied by cough and sputum, the patient himself is well and strong, eats and sleeps well, is up to his normal weight and is able to do work of some kind. Such a person certainly is not cured; he is liable to a relapse at any time, but on the other hand, such a condition as this is quite compatible with a long and useful life.

Consumption as a social and economic problem has at last awakened the interest of the great labor organizations and of the employers of labor. Slowly but surely the idea has crept into their minds that it is better and cheaper to keep well by living and working under decent conditions than it is to get sick and then to have to pay out much money in order to get well again. This accounts for the great spread of the "welfare work" in factories, stores, and other large concerns and is a great step in advance.

*Rest* versus *exercise* in the treatment of consumption is a point hotly fought. Each has its place. It is probably true, however, that too much exercise has caused countless deaths and that it is difficult to give a patient too much rest. If a patient is told to exercise, he is very apt to go too far and to exercise *until* fatigue sets in; it is then too late and the harm has already been done. One must stop exercising long before actual fatigue sets in. One of the best known authorities in this country, who has had consumption himself, has said that if he had to take treatment all over again, he would

go to bed and stay there for six months or more, until all symptoms disappeared. These are wise words.

*Outdoor sleeping* is advisable in the great majority of cases. There are some people, however, who cannot do this, especially during the cold season. They cannot be made comfortable, they do not sleep well and there is as a result a useless waste of vital energy. In these cases the wise physician will compromise and allow the patient to sleep indoors in a room well provided with windows that are of course kept wide open.

A cough is considered a necessary accompaniment to pulmonary tuberculosis. A certain amount of coughing is almost always present, it is true, but there is a great deal of energy wasted in useless coughing. The avoidance of dusty streets, crowded halls, theatres, etc., on the part of the patient will help; a simple oil spray inhaled well down in throat and trachea will often prevent much coughing, while most important of all is the mental training of the patient not to cough except when absolutely necessary. If this is done, much strength will be saved that otherwise would have been wasted.

## CHAPTER XXIV

### HINTS AND HELPS FOR TUBERCULOSIS PATIENTS

BY CHARLES L. MINOR, M.D.

Dr. Minor's "Hints and Helps" appeared originally in the *Journal of the Outdoor Life*. It is here reprinted by the kind permission of the editor of the *Journal of the Outdoor Life*. It was written primarily for Dr. Minor's own patients; hence the local references.

#### EXERCISE

1. None at all for one week after arrival, then ask the doctor about it.
2. Never exercise to the point of fatigue; stop before you are tired and don't walk "on your nerves."
3. None if your afternoon temperature the day before was over 99.5° or if your morning temperature that day is 99°.
4. None if you are uncomfortably short of breath, or if your pulse generally runs over a hundred.
5. None for one hour after meals.
6. None if your sputum is bloody or even pink.

7. No hill climbing unless it is specifically ordered.
8. No pulmonary or other gymnastics or deep breathing save when ordered.

9. No driving or horseback without permission — walks come first.

10. If you get caught in the rain while out, and get wet, it will not hurt you *if you keep on walking*, and *as soon as you get home*, take an alcohol rub and put on dry clothes.

11. In increasing your exercise never do it suddenly, but by small additions each day. The Greek athlete, Milon, of Crotona, when asked how he became strong enough to carry a full-grown bull up a mountain-side, said that he accomplished it by carrying it every day from the day it was born, his body thus being gradually accustomed to a strain which at first would have been too great for it.

#### REST

1. Remember that rest comes before exercise and that the latter is only useful after the former has so built up the system that there is a surplus of energy to draw upon above and beyond the ordinary demands of your body. Until the doctor finds that you have reached that point, exercise is harmful, and persistent, *unfretting* rest is best for you.

2. If the temperature is over  $99.5^{\circ}$ , rest recumbent in a proper reclining chair.

3. If the temperature is over  $100.5^{\circ}$ , either be recumbent on a cot outdoors or in bed.



4. If your temperature is  $101^{\circ}$  or over, go to bed at once and let the doctor know.

#### OUTDOOR LIFE

1. Aim to spend a minimum of 8 to 10 hours outdoors daily, i.e., 9-1; 2-6; 7-9. If you can do more, so much the better. If you are in earnest about getting well you will not dawdle and waste precious time indoors that might be spent in the fresh air, by getting late to breakfast or loafing indoors afterwards, nor will you seize every excuse to stay in the house. If, after returning to your home from the sanatorium or health resort, you are of necessity indoors, in an office or otherwise, all day, it is important to make up for the fresh air thus lost by sleeping out at night. When on the contrary you are living out all day long, sleeping out at night is not essential, if your room has two or more windows.

2. If at first you cannot keep warm outdoors in the winter, use more wraps or a hot water bag or get up and take a short walk, or come in and warm for a short while. *Never stay outdoors while you are chilly, but learn never to be chilly outdoors.* It is difficult if not impossible to keep warm outdoors in winter if your feet are on the ground, hence you should have a proper reclining chair. With such a chair and proper wraps you can soon learn to keep warm in all weathers.

3. Chairs that have concave canvas backs and hollow the shoulders, and stoop them, should be

avoided; *a proper chair must have a broad, flat back*, and should alter its position easily from erect to recumbent. Always keep your shoulders erect whether sitting or standing; stooped, narrow shoulders limit your breathing space and do your lungs harm.

4. Be out of doors, but protected from the wind and the weather, in all weathers, the only exception being during sleet storms; if in doubt telephone the doctor.

5. Keep your head out of the sun; it will tend to run up your temperature. If the weather is hot in summer it is often best to be quiet indoors for a part of the afternoon rather than uncomfortably warm outdoors.

#### FOOD AND EATING

1. The ideal food should be appetizing, very nutritious and not too bulky.

If appetizing but not nutritious it will undernourish you;

If nutritious but not appetizing it will disgust you;

If too bulky, however appetizing, it will stuff you.

2. If your digestion is good, a generous mixed diet (favoring especially red meats, eggs, milk, and fats) is sufficient. A raw egg and a glass of milk at 11 and at 4, if it does not spoil the appetite for the next meal or unduly "stuff" you, is desirable; but if it upsets or overloads you stop it and ask the doctor. If you find you often wake in the night and cannot go to sleep again, you probably are undernourished

and should take something to eat. If you wake more than an hour before breakfast in the morning, don't go hungry to breakfast, but eat something.

3. If your digestion is poor the doctor will give you special orders.

4. If your stomach feels heavy or painful after meals, if there is belching, or if the morning urine becomes muddy on standing, you are probably over-eating or your digestion needs attention. Ask the doctor.

5. As to the right amount to eat, never burn too little coal under a boiler or you won't make steam, nor too much, else it will all go out of the chimney in smoke and clog the boiler tubes. Learn to burn every bit that you can properly consume — no more and no less.

6. Be on time at meals and talk while you eat. If it is good natured talk it will aid digestion.

7. Never eat at irregular or odd times, and eat no candy, save directly after meals.

8. *Never eat when you are tired, and never take exercise on a full stomach;* it is a sure way to prevent good digestion. Therefore if tired, rest a half hour before meals and always be quiet one hour after. This gives your stomach time to prepare for and to do its work. After the mid-day meal spend one hour recumbent and silent out of doors.

9. Extra milk and eggs at 11 and 4 are valuable. They are always to be taken unless stopped by doctor's orders; but if they seem to overtax your stomach, let the doctor know at once. Usually from two



Showing a simple method of using the front veranda of a country house by protecting the sleeping quarters with canvas curtains. Loaned by the State Charities Aid Association, New York



A well-constructed porch with screens and awning protection, built on the roof of a first-floor veranda. Loaned by the State Charities Aid Association, New York

to six raw eggs and from four to six glasses of milk can be taken in twenty-four hours with benefit.

10. Eat slowly and chew well if you wish to get the full value from your food, and always drink your milk slowly.

11. If you have any medicines to take at meal-time, remember other people's susceptibilities and take them in private where you will not be seen.

12. Discourage sluggish bowels. They poison you.

#### CLOTHING

1. In winter wear a medium weight of wool next to your skin, unless you are accustomed to a linen mesh. In summer, in this climate (Asheville), a very thin wool-cotton mixture, or linen mesh, is best.

2. Never wear very heavy underclothing or chest protectors. At night never sleep in a night gown or pajamas only, unless they are of outing flannel, but put on a light undershirt next your skin.

3. Let your shoes be stout and warm in winter.

4. In winter wrap warmly out of doors and have an extra wrap always handy in case of a change in the weather.

5. If you get overheated and perspire change your clothes and rub dry.

6. Never change the weight of your clothes without due consideration, remembering that

“Beneath this stone, a lump of clay,  
Lies Uncle Peter Dannels,

Who early in the month of May,  
Took off his winter flannels."

During the first warm days of early spring it is wise to remember the old saw, "Stick to your flannels till your flannels stick to you."

In this climate you can generally wear your winter underclothes till the middle of May or even the first of June, and your summer ones till the 15th of November or the 1st of December.

It is often desirable to have an intermediate weight of underclothing for spring and fall.

#### BATHING AND CARE OF THE SKIN

1. A healthy activity of the skin is important, hence there should be a warm bath twice a week at bedtime.

2. The skin should be hardened against catching cold, hence a cold salt sponge taken at the bedside immediately on rising is wise, if ordered and as ordered.

3. Should you be chilly or blue after your cold bath, or if you are sick, or have a cold, or if your sputum is pink, or if your waking temperature is under  $97^{\circ}$ , stop the bath and tell the doctor.

4. When taking a cold bath your room should not be under  $50^{\circ}$ ;  $60^{\circ}$  is better.

5. If you suffer from chilliness try salt and alcohol rubs. If you tend to perspire too freely, vinegar and alcohol rubs.

## THE ROOM

1. In winter it should preferably, but not necessarily, face south, southeast or southwest; in summer usually a north, northeast or northwest room is cooler and more comfortable.

2. Have two, or preferably more, windows and an open fireplace, if possible. One-windowed rooms cannot be properly ventilated unless they have a fireplace, but can be made available by using a window tent.

3. If a furnace flue opens into your room, keep it shut tight.

4. No room mates should be allowed save by special permission, and no bedfellow under any circumstances. Two single beds are hygienic; two people in a double bed is unhygienic.

5. When in your room and not in bed, the room had best be between  $65^{\circ}$  and  $68^{\circ}$ . When well covered up in bed no degree of cold will hurt you.

## BED AND SLEEP

1. Be in bed by 10 P. M. in summer and 9 in winter, and do not read in bed. Sleep not less than 8 hours no more than 10.

2. Open all windows the last thing before getting into bed and have them closed one hour before rising.

3. As soon as accustomed to it, keep all windows open save when hoarse or during a cold, in which case ask advice. Find out if you sleep with your



mouth open. If so, ask the doctor. It is harmful.

4. Arrange your bed with your head near a window but do not sleep in a cross draught or with your head in a corner.

5. Use enough covers to keep warm, but avoid heavy bedding. Another mattress will often be better than another blanket, and if you cannot keep warm in bed, double mattresses with newspapers between them, or a hot bottle, or woolen leggings, or a thin flannel sheet, or an outing flannel wrapper will help you. As has been said earlier, *always wear a light undershirt next to the skin in bed.*

#### AMUSEMENTS

1. Never forget that while amusement is necessary for everyone, he who has not the grit to deny himself pleasure for profit, to give up an amusement however much desired, for the benefit of his health, has not the force or the ability to succeed in anything.

2. Avoid amusements which subject you to dust, or to getting overheated, whether indoors or out; for example: dancing, bowling or tennis.

3. Avoid exciting games, such as bridge-whist, or poker, or those which, like chess, or an expert game of whist, demand too much mental concentration.

4. If a musician, you must not play music which excites or deeply moves you. Light music for a short time will not hurt you.

5. An active correspondence with relatives and

friends is not allowed. You may write one letter a day if your fever is not  $100.5^{\circ}$ , but if you wish to write more, ask the doctor. Tell your correspondents not to keep you posted on all the worrying things which happen at home. If they can't write cheerfully, don't let them write at all.

6. Avoid amusements which keep you for a long time indoors, or which tend to make you lose your temper.

7. No theater or night entertainments save by special permission.

8. No shopping if avoidable, and no loafing around town. When you walk, walk in the country. Report all trips to town.

9. If your temperature is over  $100^{\circ}$ , no visitors can be seen. (Excuse yourself by putting the blame on the doctor; he is used to being blamed and can stand it better than you.)

10. No visiting without the doctor's permission.

#### CARE OF THE VOICE

1. If you are hoarse or if you have any throat trouble, limit your speaking to the absolute minimum—complete silence is best. Each spoken word is a physical injury to a weak organ.

2. Always avoid hot, dry or dusty rooms, but especially when hoarse.

3. Never strain your voice by loud or continuous talking or by calling to people at long distances.

( 4. Smoking is not allowed without special permission, and *inhaling under no circumstances.*

5. Do not sing without telling the doctor. If your throat is not perfectly healthy it will injure it.

## COUGH AND EXPECTORATION

1. The only cough which is useful is that which easily brings up sputum; any other is harmful to you and irritates your respiratory tract. Therefore, unless it comes up easily, never try to bring up something by hard coughing. By practice and will power seventy-five per cent. of your cough can be suppressed; therefore *suppress it*.

2. When you cough, *always cover your mouth with a handkerchief and not your bare hand* as you can thus soil it. If you want to know why you should cover your mouth, hold a bright, clean looking-glass in front of it while you cough once or twice and note that it will be speckled all over with tiny spots which came out of your mouth and lungs.

3. If talking increases your cough, lessen your talking.

4. Always suppress your cough at table; if you cannot, leave the table.

5. If coughing is troublesome and keeps you awake, a dose of cough medicine at bed is usually wise; ask the doctor. In the daytime, until you have learned to control your cough, a dose or so may help a weak will for awhile, but never become dependent on it or let it take the place of your will.

6. *Never spit on the ground, even out of doors, or anywhere else, save in a sputum box or pocket spittoon, or, where these cannot be used, in a square*

of cheese cloth, to be used but once and to be placed after such use in a special rubber lined pocket till it can be burned.

7. Never swallow your expectoration *under any circumstances; this can be very dangerous for you.*

8. Avoid soiling your hands by rubbing them on your lips; wash your hands often, and be careful to clean your teeth two or three times a day.

9. Kissing may be an agreeable pastime, but until you are thoroughly well and have no more cough or expectoration, it should be given up. In any case, kissing on the mouth is not wise or healthy, and should be permanently given up, especially when kissing little children, to whom it is very dangerous.

10. Should, by accident, the floor or anything else become soiled by expectoration, it must be carefully wiped up *at once*, with a one to twenty solution of carbolic acid in water, and some of this solution should be allowed to soak into the spot for an hour or so afterwards.

11. If the above precautions are fully observed, *there is no need for anxiety as to any danger of infection for yourself or others.* Tuberculosis is not easily transmissible like smallpox or scarlet fever, and among decently cleanly people, in clean houses, it is with difficulty handed on to others.

#### MEDICINES

1. None unless ordered.
2. Stop any that will upset your stomach or spoil your appetite, and tell the doctor at once.

3. *No alcohol without special permission.*
4. When taking medicines don't let other people see you. Put yourself in their place.

## MISCELLANEOUS

1. *Remember that everything which is not expressly allowed is forbidden.*
2. If in doubt about anything, telephone the doctor. It won't bother him and it may save you from hurting yourself. Patients are not allowed to weigh in the drug stores or anywhere else save the doctor's office.
3. If you catch cold or feel badly in any way, telephone the doctor at once.
4. In the beginning, if you are not used to fresh air, don't go all at once to fully open windows and constant outdoor life in cold weather, but in a few days you will be able without difficulty to live the life strictly *and with pleasure.*
5. Avoid following the advice of solicitous friends without first consulting the doctor.
6. One of the most dangerous times for you is when you reach the point where, while not yet really well, you feel perfectly well. Then it is that even the most prudent are apt to forget what they have been taught and to overdo. Remember that in this trouble the symptoms can all cease long before the disease is really cured, and that, excellent as it is to feel entirely well, only a careful physical examination and a long observation can prove you so.

7. When inclined to complain of the weather remember the old jingle, and *don't*.

“As a rule man's a fool,  
When it's hot he wants it cool;  
When it's cool he wants it hot —  
Always wants what he's not got.”

8. The relation of the patient and the doctor in this trouble is of extreme importance, and if the results of the treatment are to be satisfactory, a complete co-operation and confidence between them is *essential*.

The nature of this relationship is shown by the following: A man once owned a steam yacht on Lake Ontario, and was his own captain, sailing the boat wherever he pleased without anyone's aid. One day, however, he was obliged to go down the St. Lawrence River to Montreal, and much against his will, started on the trip. When he reached the Thousand Islands he put up for the night, and as he did so, a man on the dock asked him where he was going. “To Montreal.” “But you have no pilot!” “Oh, bless you, I don't need any pilot; I always run my boat myself and need no help.” “Well,” said his interlocutor, “that does very well on the Lakes where you have deep water, but in this river there are rapids and hidden rocks and whirlpools, and you, who know nothing about them, are pretty sure to wreck your boat.” The owner thereupon hunted up a pilot, who, after carefully inspect-

ing the hull and engines, said, "Now, please go down and stoke the fires carefully with good coal so as to keep up a good steam pressure, and run the engines according to my ideas and not yours, for if you don't, I can't possibly get you through; but don't come into the pilothouse and bother me, for I will have all I can do to get your boat safely through to Montreal. When we are passed all the dangers, I will turn her over to your own control, and you should then be able to run it yourself under all ordinary conditions."

#### MENTAL ATTITUDE

1. *Never talk of your case or symptoms with anyone save the doctor, and allow no one to talk of theirs to you.* Remember the saying, "I have troubles of my own; go tell yours to the policeman," or in the words of the popular hymn, "Go bury thy sorrows, Let others be blessed, Go give them the sunshine," etc.

"What can be more unkind than to communicate our low spirits to others, to go about the world . . . poisoning the fountains of joy? Have I more light because I have involved others in the same gloom as myself? Is it not pleasant to see the sun shining on the mountains, even if we have none of it down in the valley? Oh, the littleness and the meanness of that appetite for sympathy that will not let us keep our sorrows to ourselves! Let us hide our pains and sorrows. But while we hide

them, let them also be spurs within us to urge us on to all manner of overflowing kindness and sunny humor to those around us."— FABER.

2. *Don't Fret or Worry.* Fretting or worrying never helped anyone. If you cannot change conditions, an uncomplaining acceptance of them will not make them more hard to bear and often will reveal a silver lining to the darkest cloud. We take the sunshine as our right; why not accept the clouds cheerfully? "Heroism for most of us consists in cheerful endurance. . . . Our training for the needs of new adventure comes from this familiar experience of courageous bearing in the hours of trial. Not to whimper, not to cringe, never to listen to the voice of despair, never to make our burden an addition to the loads of other burdened men, to follow the gleam in the darkness, to hold to God in grief, to obey with no reason given, when the law is made plain — he who can walk thus through the shadowed way is arming himself for high adventure and great service.

"Every trouble is an opportunity to win the grace of strength. Whatever else trouble is in the world for, it is here for this good purpose, to develop strength. It is something which is hard to do, and . . . strength is increased by encounter with the difficult. A world without any trouble in it would be a place of enervation and laziness. . . . Every day we are blessed with new opportunities for the development of strength of soul."— HODGES.



3. If thinking makes you blue, use your will power, stop thinking of that which worries you and think of something else; its good practice for your will.

“Cultivate your will power. Bring the will to bear upon your daily thinking. Has it ever occurred to us that we can *will* our happiness? The proverb runs that, ‘Everyone is happy who thinks he is,’ and the supreme point here is, that *we can order our thinking*. You cannot . . . regulate the external weather by volition. The rain comes down without asking your leave, *but our mental weather is in our own hands*. We can disperse the clouds here by an effort of the soul. The grandest liberty we possess — *and we all possess it* — is that of choosing our outlook. Let us in these matters be masters in our own house. Why not hope instead of fear and trust instead of despair? We have not learned the art of living unless we have learned *the art of willing*. The disciplined soul thinks of possible evils just so much as is needful for practical *action and no more*. It will not dwell under cloud when it knows the way to clear sky.”

4. Don't be impatient to get well; it will only retard your recovery. Nothing worth having in this world ever comes quickly or easily, and a good cure is often a slow one. Remember that to no half-hearted or light-minded seeker after health will healing come; that the results are largely dependent upon the will power, intelligence, determination and persistence of the patient; that while the doctor can

show you the way, *only YOU* can walk in it. Keep up your side of the partnership with the doctor honestly; remember that you must work hard as well as he; *be in earnest*, cultivate your will power; be hopeful; be cheerful; see the bright side, for good spirits is the best medicine, and sunshine of a smile can dissipate many a cloud.

“Talk happiness!

Not now and then, but every blessed day,  
Even if you don't believe  
The half of what you say;  
There's no room here for him  
Who whines as on his way he goes;  
Remember, son, the world is  
Sad enough without your woes.

“Talk happiness each chance  
You get — and talk it good and strong;  
Look for it in the byways  
As you grimly plod along;  
Perhaps it is a stranger now  
Whose visit never comes —  
But talk it! Soon you'll find  
That you and Happiness — are chums.”

J. W. WRIGHT.

## CHAPTER XXV

### THE PASSING OF TUBERCULOSIS

Stock-taking is a regular and necessary feature of any large concern. The campaign against tuberculosis is an enterprise which concerns us all. It is well worth while, therefore, for us to stop, take account of stock, and find out where we stand in this fight, and whether we are playing a winning or a losing game.

Will tuberculosis ultimately disappear from the face of the earth, or will it become a comparatively rare disease as leprosy is now? Or will the disease still remain a common one among us but lose much of its terror and power to kill as is now true with the ordinary case of acute bronchitis or cold in the head? Or again, may we expect that sooner or later some specific drug or vaccine or toxine will be discovered which will cure consumption just as malaria is cured by quinine and diphtheria by anti-toxine?

These are big questions and ones concerning which we have all pondered at one time or another. Probably none of us will see the time when any chemical or drug will cure tuberculosis; many have been tried and found wanting. It is likewise very unlikely that tuberculin or any allied preparation

will be discovered which will actually cure tuberculosis in any such sense as that in which anti-toxine cures diphtheria. Doubtless enthusiasts will continue to come and go, each in turn proclaiming his particular preparation—whether it be chemical, drug, tuberculin or vaccine—as the long-sought-for cure-all for consumption. And doubtless many tragedies will be caused thereby. But it is not in this way that we shall eventually conquer the disease.

The death rate from consumption has been slowly but surely declining in all civilized countries during the past fifty years. Forty years ago in Massachusetts the death rate from tuberculosis per 10,000 inhabitants was nearly 50; now it is nearly 13. A similar decrease has taken place in Europe, England, and the rest of this country. To what has this been due, and will it continue so that, in fifty years more, tuberculosis will have disappeared or become a harmless malady? The decrease in the death rate has been due to two causes. The first of these is the destruction of the germs of tuberculosis brought about by teaching people how the disease is spread by means of sputum and how this should be destroyed, reporting of cases, and particularly isolation and segregation of the advanced consumptive. The second cause has been the gradual establishing of an immunity against this disease. Just as tuberculosis is terribly fatal among the Indian and Negro races, which from centuries of out door life in places comparatively free from disease germs have had no opportunity to acquire

any resistance to the disease, so among the so-called more civilized races, whose methods of living throw them into constant and daily contact with disease germs of all kinds, including those of tuberculosis, an immunity against the disease has been built up.

These two factors — decreasing the number of germs, and increasing the bodily resistance against them — have been responsible for the diminishing death-rate from consumption in the past, and will be responsible for its continued decrease in the future. Whether or not this will result in actually eradicating tuberculosis from our midst or in making it a mild and harmless disease, is a question of purely academic interest and one that does not concern us.

The question that does concern us, however, is in what way we can each of us play our part in helping to conquer this disease. The medical profession alone cannot do it all. An educated and enlightened public must back up and assist the physicians in their efforts. We have already accomplished a great deal in this respect, but we have still a long way to go. If each one of us plays his own part and does what he can to assist, however little this may be, our goal will be within sight, and the word tuberculosis will no longer strike terror to our hearts.

THE END

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